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ORIGINAL LECTURES.

CLINICAL LECTURE ON CASES ILLUSTRATING THE TREATMENT OF HEMORRHOIDS, FISSURE OF THE ANUS, AND CARCINOMA OF THE RECTUM.

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GENTLEMEN.—This man, 46 years of age, was operated upon several years ago for external hemorrhoids. He now complains of difficulty in micturition and pain about the anus. On examination by palpation I find a fissure, situated posteriorly, extending up to the inner margin of the external sphincter. You may ask, How do I know that there is a fissure, since I have not seen it, and have no other proof of its existence than what is told me by my finger introduced into the rectum? A fissure, especially one which is not recent, can be diagnosticated by the touch quite as well as by visual examination. The margins of the fissure are indurated, and can be distinctly felt by the finger of one whose touch is tolerably fine.

I have asked the assistant whether the patient has been examined previously because he complains of trouble with micturition. A simple examination of the anus of a nervous patient is frequently sufficient to stop the flow of urine. You know that the connection between the nerves supplying the rectum, bladder, and adjacent organs is very intimate, and that reflex irritation of the bladder at once manifests itself in many patients of a nervous disposition by irritation of the rectum. Thus, for instance, certain persons suffering with prostatic disease will also suffer with spasm of the sphincter ani; and, *vice versa*, a patient who is very sensitive, and suffers with an internal hemorrhoid located near the prostate, will complain of difficulty in micturition. By examining such a patient, stretching the sphincter, as, for instance, by the introduction of the speculum into the rectum, you may unintentionally stop urination, and it may become necessary to withdraw such a patient's urine with the catheter for ten days or two weeks after your examination.

We notice by palpation over the pubic region that the bladder is empty, and this is now confirmed by the introduction of the catheter, which withdraws very little urine.

Regarding the care of catheters I may say a few words. It has become the fashion lately to treat everything to corrosive sublimate or carbolic acid without any discrimination. This has led to a good deal of mischief, not only in the peritoneal cavity, but also in the urethra. The urethra has a very sensitive mucous membrane, and in disinfecting your instruments before introducing them into the urethra you use sometimes as high as a five-per-cent. solution of carbolic acid, or one to one thousand of corrosive sublimate. Now, these solutions are very irritant. But what does irritation mean? Irritation is an expression which may mean ten different things. The word occurs on nearly every page of old surgical works, and on nearly every page it is intended to mean something else. In fact, you can imagine almost what you please when one speaks of irritation. It may mean acute pain from a mechanical cause; it may mean any degree of inflammation, as chronic inflammation, acute inflammation, phlegmonous inflammation. Let us, then, be more precise, and define what we mean when we speak of irritation. I mean by irritation in this case that when a solution like corrosive sublimate or carbolic acid is introduced into the urethra, coming in contact with the tender epithelium, it has the effect of causing corrosion. It coagulates and kills the most superficial layer of epithelium lining the urethra. This leaves an eschar; the cells become opaque, there remains a white blotch. This is cast off, leaving a raw surface. That raw surface must, of course, give rise to a secretion. Thus the result of the introduction of an instrument into a strong solution of corrosive sublimate or carbolic acid before passing it into the urethra is a urethritis with a discharge. Sometimes there is a good deal of discharge, especially in patients upon whom catheterism has to be regularly repeated. Suppose you have a healthy patient, except that he is suffering from a fissure in ano or hemorrhoids. You make an examination or operate, and following this the patient becomes unable to pass his urine. You must

now catheterize the patient, or instruct the nurse to do it, three, four, or six times a day. You are required to be very careful in all your steps; you are on the modern antisepic racket, to use a not very elegant but an expressive phrase, so you keep your catheter in one of these strong antisepic solutions, and when the time comes to withdraw the patient's urine you take your catheter out of that solution and introduce it into the patient's urethra and bladder. About the third day the man complains that catheterism is painful. Your manipulations had not been painful at all in the beginning, but now they have become very painful. At your next visit he shows you his penis, and says, "Doctor, I think I have the clap," and he is astonished, and wonders where he got it. He has simply an acute inflammation of the urethra, which you have caused by an unwise application of an advanced principle in modern antisepic surgery. The best thing can be turned into mischief by lack of judgment in carrying it out. Therefore, whenever you introduce an instrument into the urethra which has been disinfected in a strong solution of any kind, you should always first free that instrument from the corrosive substance by flushing it with hot water. After that, if you introduce it into the bladder it will not harm the patient.

Before introducing the catheter we must have the patient assume the proper position. He should place the heels together, flex the legs and thighs, and spread the knees apart. That gives the greatest amount of relaxation. Now you grasp the glans penis and introduce the instrument into the meatus, using at no time during its passage any degree of force. Hold the handle of the instrument parallel with the longitudinal axis of the body, and push it very gently forward, pulling the penis over it, just as you would pull your glove over your index-finger. Continue this until the instrument ceases to go forward with very gentle pressure. Now if you place the index-finger of your right hand on the perineum you will feel the end of the instrument below the symphysis pubis. It is important to pass around this point without exerting any undue pressure. Having got thus far, you take hold of the handle of the instrument and gently depress it between the thighs of the patient, and it will slip into the bladder without any pressure on your part.

Catheterism, if carried out properly, should never be followed by hemorrhage. One drop of blood making its appearance after you remove your sound or catheter indicates that you have not passed the instrument in a skilful manner,—that you have used too much force.

While the instrument is in the bladder you can very readily ascertain the size of the prostate gland. The catheter serves as a guide in ascertaining its exact location and size.

Now, in trying to ascertain the relations of the prostate in this case I have come upon something which none of us need to have suspected. It is something which explains his whole trouble,—the presence of the hemorrhoids, of the fissure, and also the difficulty with his bladder. There is just above the prostate and behind it, at a point which I can just reach with the tip of my index-finger, a pathological change encircling about two-thirds of the gut; a crescent-shaped indurated mass, constricting the rectum so that the end of my index-finger will only comfortably pass through it. It is situated more to the right side of the patient, is apparently attached to the prostate; the mucous membrane of the rectum is still movable over it. It is apparently a growth taking its origin from the mucous membrane, but not from its surface. It is not an epithelioma in the ordinary acceptation of the term. You will remember that there is epithelioma of the rectum just as there is epithelioma of the face or tongue,—that is, a cancerous new growth which takes its origin from the epithelial covering of the surface of the parts. This seems to me to be rather an adeno-carcinoma, if you wish to accept that term, the greatest part of which consists of epithelial elements. The disease probably started in one of the muciparous glands which occupy the interior of the mucous tissue of the rectum, and, therefore, has not ulcerated, as epithelioma is apt to do very soon, on account of the macerating effect of the moisture in the rectum in which it is constantly bathed. An epithelioma of the tongue is an ulcer from the beginning, because of maceration of the surface of the epithelioma from the presence of saliva, which keeps the horny epithelial matter of the diseased portion washed away. The same thing occurs in the rectum when the epithelioma begins on the surface of the mucous lining.

This man is forty-six years of age, about the age when carcinoma is most common. He has lately lost a great deal in flesh. It is probable, therefore, that this adenocarcinoma will go on increasing in size and thickness. In fact, everything about the case points to rather an unfavorable prognosis.

When there is a new growth, rapidly increasing in size, located near the neck of the bladder, it does not necessarily involve the prostate nor the interior of the bladder, although bladder-symptoms may be present. It is sufficient if it be near enough to irritate the nerve-filaments which go to the neck of the bladder.

This case, gentlemen, is a very interesting and a very important one. It is not alone interesting from the fact that we have successively discovered conditions any one of which seemed sufficient to explain his symptoms, but which at first thought would seem to have no connection the one with the other. The lesson which I wish to draw from the case is one which does not belong especially in the pale of surgical teaching, yet it is of the utmost importance to the success of the surgeon. Never let a patient with rectal symptoms go away from your office without giving him a thorough examination,—without making all you can of that first examination. At least do not let him go away with your opinion of the case unless you have made the necessary examination of all the parts. If I had told this man that he had hemorrhoids alone, which was all that I discovered on external inspection, I should have been far from the truth. I should have stated the truth in saying that he had hemorrhoids, but not the whole truth, and certainly not the essential part of the truth: that would have remained a mystery. Examining further, I found a fissure in ano. But that was not all. Going still further, and examining the bladder and prostate, something was felt high up in the rectum which at once threw light on the whole of the complex symptoms of which he complained, giving us a clear insight into the case and enabling us to make an intelligent diagnosis and to decide what we can do and what we cannot do for the patient. If we had treated this man for hemorrhoids alone, we would have expected a cure and would have been disappointed. By and by we would have found the fissure, would have cut it; yet the patient would

have come back to us in a worse rather than in a better condition. He would have become cachectic. A colored discharge would have appeared at the anus. Then some person would have put his finger inside and found an ulcerated tumor of the rectum. Of course the reflection would have fallen back upon the first physician who had treated the case for months without having approached a correct diagnosis of the man's condition. Yet, gentlemen, this sort of practice is not uncommon. It is seen in the treatment of rectal troubles the same as in the treatment of urethral troubles. You know that sometimes a patient comes into a physician's office and says he has a clap, and the doctor does not even look at him, but gives him a prescription and tells him what to do. He thus treats the patient weeks and months, and the patient all that time is expecting a good result. Of course, if the patient has happened to hit upon a correct diagnosis of his case the doctor's treatment may prove of some benefit to him. But never rely upon the statement of the patient or upon a superficial examination which you yourself make in giving an opinion about an organ like the rectum or the urethra.

HEMORRHOIDS.

We will now examine a patient with hemorrhoids, treated by Dr. Wyeth by injecting the tumors with a mixture containing carbolic acid. I believe that a moderate degree of hemorrhoidal trouble can be treated successfully by carbolic acid injection. The objection raised to this method is that it sometimes causes extensive sloughing, not only of the hemorrhoidal node, but of a large portion of the mucous membrane of the rectum. A case occurring in New York was reported, I believe in the *Medical Record*, in which four inches of the rectal mucous membrane came away after a single injection of a hemorrhoidal node with carbolic acid. In some cases phlebitis, etc., have resulted, placing the patient in great danger. But my personal experience with this method is limited to only one case. I have not employed it oftener because most of the cases which come under my care are either light cases, not calling for any operation, or grave cases in which I prefer to give positive and permanent relief by resorting to the operation which you have seen me perform repeatedly at the hospital. I mean

the use of either the ligature or the actual cautery and clamp.

Mild cases of hemorrhoids, or those in the incipient stage, I frequently see get well without any operation at all. I have my share of such cases, and I rarely operate upon them. But I take the trouble to examine the patient carefully from head to foot, to learn all that I may about his internal economy. First, I examine for large masses of fecal matter hoarded up in the gut. This is a very ordinary condition of things in a man of sedentary habits who is over-fed and does not take sufficient exercise. Nearly all persons who suffer from hemorrhoids belong to this class. On examining them carefully you will find the large gut filled with fecal matter. But they may assure you that they are as regular as clock-work; they have a motion of the bowels every morning; and sufficient, they think. Apparently it is sufficient. But if you examine the rectum of such persons, as we often have opportunity to do very thoroughly at the post-mortem table after they have died of some pulmonary or other disease, you will find an extraordinary condition of things. The rectum and colon, as you know, are provided with a number of lateral pouches of greater or less depth. In such patients you will find these pouches filled with fecal matter. It differs in color, as well as in consistency, from ordinary fecal matter; it is harder, and of a slaty color. The evacuations which these patients have take place only through the middle of the gut, and more and more of the fecal matter becomes deposited on the walls. Imagine an old sewer being filled up in that manner, and you can form some idea of the interior of these people. As the channel becomes narrower and narrower from successive deposits of fecal matter along the walls of the gut, the patients suffer more and more, the descending colon and rectum feel like a hard bologna sausage; if you press upon it with your fingers the indentation remains, as if a mould were made of clay. Now, give this patient a good dose of calomel and salts, causing his bowels to move freely, and then examine him, and you will often still find a large quantity of faeces distending the intestine. But after once thoroughly cleansing out your patient he will not need an operation for the hemorrhoids. You will have done what a learned, sensible physician should do. You will not have treated

the hemorrhoids as the pile-doctor does, whose vision does not extend beyond the internal sphincter; but you will have treated them as does the modern intelligent physician, whose vision takes in the entire patient. You will have cleaned out the Augean stables and have done the man a real service.

Look upon another patient, a fat man, one whose skin is pale, who appears to have no blood. Examine him, and you find that he has an enlarged liver. You question him, and you find that he has been drinking more beer than is good for him. Now, if such a man has internal hemorrhoids, would it be rational simply to treat those hemorrhoids? He looks like a vigorous man, but you find that after ascending a few steps to enter your office he is out of breath and is glad to sit down and rest himself. He has come to be treated for hemorrhoids, but on further examination you find not only enlargement of the liver, but also disease of the heart. There is obstruction to the whole portal circulation. Of course the hemorrhoidal veins are over-filled. Would it be rational for the physician to treat such a patient simply for hemorrhoids? Of course not. If he did so treat him, his diploma should be taken from him. The heart-disease ought to be treated, and, if successfully, the hemorrhoids will disappear. I have given these examples to show that hemorrhoids in the incipient stage do not require surgical treatment. Topical treatment will, of course, make it easier for you to effect a cure, and it will satisfy the patient. He will feel that something is being done for his piles. He could not understand that you were benefiting a diseased condition in his rectum by treating his heart alone. He is a layman; he cannot see through the whole case. A good many doctors cannot. Therefore, give him some application for the anus. Let him put an ice-bag there, or a salve, or use an astringent injection.

But when you have to deal with a hemorrhoidal condition of an aggravated character, where considerable pathological change has taken place, where there is considerable infiltration and hypertrophy and prolapsus of the mucous membrane surrounding the hemorrhoidal nodes, where they have become ulcerated and reached that stage when they cannot shrink and return to a normal state, then

an operation is necessary; and in that case I think it is better to burn them away, or to ligate them. But there is weighty authority for the local use of carbolic acid: such men as Weir, Lange, and Wyeth, in this city, employ it with good results.

ORIGINAL COMMUNICATIONS.

CASES OF EXPLORATORY LAPAROTOMY FOLLOWED BY APPROPRIATE REMEDIAL OPERATION.

CASE I.—*PERITYPHILITIC ABSCESS; AMPUTATION OF THE VERMIFORM APPENDIX; RECOVERY.*

CASE II.—*RUPTURE OF CYST IN TUBAL PREGNANCY; INTERNAL HEMORRHAGE; DEATH.*

Read before the College of Physicians of Philadelphia, June 1, 1887,

BY FRANK WOODBURY, M.D.,

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I HAVE the honor of presenting to the College this evening a private patient who five weeks ago to-day was apparently *in articulo mortis* with perityphilitic abscess. Laparotomy was promptly performed by Dr. Thomas G. Morton, the abscess evacuated, and the appendix vermiciformis removed at its origin, as it was found to be the site of a large perforating ulcer. I also present the specimen taken from this patient, consisting of the vermiciform appendix almost divided by an ulcer; also a portion of the omentum which was included in the abscess and removed with the appendix. Accompanying these is a small fecal or phosphatic concretion, resembling in size and general appearance a cherry-stone (which it was at first supposed to be), which evidently was the cause of the ulceration. The notes of the case are briefly as follows:

Charles M. N. K., 26 years of age, born in Philadelphia, paper-hanger by occupation, not married, of spare frame, of good habits, had always had good health except that for the last three or four years he has been subject to sudden and severe attacks of abdominal pain. These attacks came on without warning while he was in excellent health, and would completely prostrate him. The pain was of a stabbing character, and was most intense across the lower part of the abdomen, and especially around the umbilicus; it was attended by great irritability of both rectum and bladder; sometimes there would be diar-

rhœa, but there was always a marked increase in the quantity of water voided, the urine being red "like blood" in color. He is of the opinion that he has at times passed blood in his urine. These attacks, after lasting for a few hours, usually passed away gradually, leaving him rather weak for a short time; but he rapidly recovered, and enjoyed uninterrupted good health until the next attack came on.

I first saw him on the 20th of April, when he came to my office complaining of having taken cold. He looked haggard, skin and conjunctivæ rather sallow, tongue coated, no appetite, bowels constipated. He said that he felt miserable, and had pains in his muscles in different parts of his body. He had frequent micturition, and was passing a remarkably large quantity of pale urine. At this time he did not complain of abdominal pain. He was given fractional doses of calomel and sodium bicarbonate with pepsin, and directed to keep his room.

The urine, examined when he returned on the next day, contained a large proportion of albumen (one-fifth on boiling), and under the microscope showed many leucocytes and a few hyaline casts.

April 22. Felt nauseated during the night, and took some mustard-water to cause emesis. Bowels had been moved satisfactorily with small doses of calomel. After taking the mustard-water he vomited, but was not much relieved. During the day had great irritability of the bladder, and was much prostrated. He came to my office, but was so weak that he had to rest for an hour and take stimulants before he could go home.

April 23. Spent the day lying upon a lounge; now complaining of abdominal pain. He had not slept, and was very restless. Bowels not moved for two days. Repeated calomel in fractional doses (gr. $\frac{1}{10}$ every hour until five doses were taken), and ordered quinine hydrochlorate, gr. xii daily. Poultices to abdomen.

April 24. At morning visit found that during the night he suffered intensely and did not sleep at all. Bowels not yet moved. Ordered a cupful of hot water every hour to assist the action of calomel given yesterday. In the afternoon he had had several copious movements, but the pain persisted. He indicated the point of greatest tenderness about midway between the umbilicus and the middle of Poupart's ligament. A resisting mass as large as a small egg could be detected upon deep pressure in this locality, but examination caused severe pain. Morphine sulphate in half-grain doses was given every two hours, or until pain was relieved. Poultices again applied over abdomen. Temperature 103.5°, pulse 140.

April 25. Had a very bad night. Pain in tumor excruciating, swelling somewhat larger, very tender. Skin not discolored; tumor evi-

dently beneath the peritoneum. Passed urine which was said to contain some small blood-clots. Dr. Jas. C. Wilson saw the case in consultation. Diagnosis either intussusception or perityphilitic abscess. Ten foreign leeches were applied over the spot of tenderness, with great relief to the patient. Morphine and quinine were continued.

April 26. Skin around leech-bites inflamed, tumor more flat and very tender, apparently nearer the surface. Bowels not moved since the 24th. A pint of warm sweet oil was thrown into the colon with a long tube; this felt comforting, and later produced evacuation of the bowels.

April 27. Skin around leech-bites more swollen, injected, and tender. The right lower half of abdomen was dull on percussion, the dulness extending over the middle line from a point just above the anterior inferior spine of the ilium; external to this the percussion-note was clear. General condition poor, face pale, features pinched, beads of perspiration on forehead. It was decided, upon consultation with Dr. Wilson, that opening the abdomen would be justifiable. Dr. Morton saw him at 11 A.M. At 2 P.M. laparotomy was performed. The leech-bites were noticed to be suppurating. An ounce of whiskey was given before the ether was administered. The field of operation was cleaned with soap and water, and neighboring hair removed; the surface was again washed with ether, followed by corrosive sublimate solution (1 to 2000). The usual antiseptic precautions were observed as to instruments, and the field surrounded by towels wet with the mercuric solution. The incision was made directly over the swelling, and finding the muscles infiltrated with pus it was extended until it measured nearly ten inches; commencing just above and two inches to the right of the umbilicus, it continued obliquely downward to the pubes. The peritoneum was opened, and a free flow of pus followed, having a decidedly fecal odor; in it was found a concretion resembling a cherry-stone. The vermiform appendix was greatly swollen, and exhibited a perforating ulcer extending three-fourths around its circumference and very near to the point of origin. A silk ligature was applied close to the cæcum and at the terminal portion of the appendix, and the intervening portion, comprising almost the whole organ, was removed, together with a large portion of omentum which projected into the abscess-cavity, the walls of which were then scraped with a curette and doused with simple warm water.

Following the operation he entered upon convalescence, which was uninterrupted. He was entirely free from abdominal pain, except from distention of the bladder, requiring the use of the catheter for a week. The bowels were moved naturally on May 1, after he had yolks of two eggs in milk. The tem-

perature fell after the operation, and did not again rise above 100°. The drainage-tube was removed piecemeal; the last portion was taken away on the 13th of May. He sat up May 11, and rapidly regained strength. He was out riding May 21. His recovery was assured by careful nursing, the administration of a small quantity of whiskey, a teaspoonful every two hours, and the use of Bovinin, and the Hoff's Extract of Malt, at first every two hours (3ss of each); lately he has been taking it only four times a day. At present the wound is healed and he appears to be in his usual health.

Case II.—Mrs. W., æt. 37 years, German, married nine years, never pregnant, had complained of more or less pain in the abdomen for a couple of weeks early in May, but had continued at house-work,—washing, lifting tubs of water, and spending much time upon her feet. Previously she had good health, menses regular, bowels constipated usually. About the middle of the month there was obstinate constipation, upon which powders obtained from the druggist were without effect. The abdomen was then rubbed with turpentine and sweet oil at her husband's suggestion, and a large enema used, which produced a copious evacuation about eleven o'clock on May 20. Upon returning to bed, in about an hour after the bowels were evacuated, she experienced excruciating pain low down in the right side of the abdomen and around the umbilicus. She was seen by me for the first time about one o'clock A.M. May 21, when I found her lying upon her left side, with the knees drawn up, complaining that movements caused increase of pain. A tumor as large as an egg was detected in the right hypogastric region, above the middle of Poupart's ligament. It was intra-peritoneal, and not a hernia. Under the influence of deodorized tincture of opium she became more comfortable, but in the afternoon she seemed to be growing weaker, the abdomen was rather distended and uniformly tender, and her pulse was soft and rapid (140 to the minute). During the afternoon she vomited freely a watery fluid, and with it a large ascaris. Her menses had appeared on the 16th and had lasted four days, but on the 21st she had a copious flow of blood from the uterus.

Exploratory laparotomy was advised, and she was removed to the Pennsylvania Hospital, where the operation was performed at 9 P.M. Upon opening the peritoneum a large gush of blood occurred, and a small foetus of about four weeks' development came out among the clots; it was estimated that about three pints of blood was contained in the abdominal cavity. There was a ruptured sac in the right tubo-ovarian region, the result of the arrest of an impregnated ovum near the extremity of the Fallopian tube. A silk ligature was thrown around the pedicle near the uterus, and the tube, ovary, and sac removed. A few

points of oozing were touched with the Paquetin cautery, the wound thoroughly cleansed with hot water, and a drainage-tube introduced. The patient had no pain after the operation, but did not react well. On the next evening transfusion of blood was performed (one of the resident physicians furnishing eight ounces for the purpose), but with only temporary improvement. She died from exhaustion about 2 P.M. on Tuesday, having survived the operation sixty-five hours.

The autopsy showed a wound united, except just at the point of emergence of the drainage-tube, the track of which was lined by lymph without any evidence of suppuration.

The uterus was found to be the site of a number of interstitial and sub-peritoneal fibroid tumors, and was moderately enlarged and contained some decidua membrane and blood-clots.

In the discussion of this paper Dr. Morton reported another case of laparotomy which he performed for perityphilitic abscess, seen in consultation with Dr. Edward R. Stone, of this city, who furnished the following notes:

"Mrs. G. W. G., æt. 34, mother of one child (four years old), has been healthy, except that she was of a nervous disposition with decided hysterical tendency. The bowels were habitually constipated, and she had at various times during the last three years attacks of pain, apparently in the bowels, which readily yielded to anodynes and laxatives. It was reported that she had a severe attack of pain, with vomiting, last July, while she was out of town, which required hypodermics of morphia and confinement to bed for four days. In December last I attended her in an attack of abdominal pain which was not confined to any particular region, and which passed away in a few hours.

"On February 17, 1887, she was much on her feet, shopping, etc., and on the evening of that day she took a dose of pills to bring on the menstrual flow, which was a few days over-due. February 18 was spent in active work, washing and ironing. The pills operated on the bowels three or four times, but menstruation did not appear. She went to bed as well as usual, but about 11 P.M., February 18, she had severe pain, with vomiting of the contents of the stomach. The pain was described as darting from the right hypochondrium towards the navel. There was no tumor perceptible, nor tenderness to pressure. Counter-irritation with mustard was ordered, and one-fourth grain of morphia injected under the skin.

"February 19, 10 A.M. Morphia controlled the pain for about three hours, during which she had some sleep. She has not vomited, and the abdomen appears normal, except that she complains of some tenderness to the right

of the umbilicus; temperature and pulse normal. Hypodermic injection repeated, and an anodyne mixture ordered.

"February 19, 6 P.M. Pain has not been very severe, but returns when the effect of morphia passes away; no vomiting to-day; bowels have not moved since Thursday; abdomen somewhat tympanitic, and tender to the right and above the umbilicus; tongue somewhat coated and red at tip; anorexia; temperature 100°; pulse 90. Morphia continued, and turpentine stupes, followed by purtices.

"February 20, 9 A.M. Has passed a restless night, requiring frequent doses of morphia; vomits freely a yellowish fluid, apparently from the small intestine; abdomen quite tympanitic and tender; no faeces nor flatus have passed from the rectum; expression anxious; pulse small, 110; temperature 101°. Small doses of calomel were added to the treatment, which served to check the vomiting, except when fluids were swallowed in considerable quantity. There was no abatement of the disease during the day, and Dr. Montgomery saw her in consultation in the evening, and advised an exploratory incision, which was declined.

"February 21. Symptoms continue. She was quieter and much weaker; abdomen very large and tender; tongue dry and red; vomiting easily provoked. An enema of water was administered during the night, but it brought nothing away. The operation of abdominal section, with a free incision, washing out the cavity, was performed this day.

"She did not recover from the shock, dying about 2 P.M. February 21, 1887.

"The points of interest from a medical point of view I may be allowed to emphasize:

"1. The possible relation of former attacks of abdominal pain to the ulceration of the appendix.

"2. The effect of the pills in hastening an impending perforation.

"3. The seat of pain not at all in the usual locality for disease, near the ileo-cæcal valve. The early symptoms seemed rather to indicate the passage of a gallstone.

"4. The paralytic distention of the bowel simulating an obstruction from some more active cause.

"EDWARD R. STONE.]

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,

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PATHOLOGICAL ANATOMY OF THE EYE IN BRIGHT'S DISEASE.

THE following is a synopsis of an extremely important contribution to this subject by Dr. Carl, Archduke in Bavaria, well known for his work in ocular

pathology. The monograph is made up of a series of observations made upon sections prepared with the latest and best appliances known to the microscopist, and is especially valuable for the minute study of the ocular blood-vessels. The value of the observations has led to so extended a synopsis of this monograph.

Case I.—Boy, aged 12. Admitted February 8, 1882, in a completely unconscious state, into Professor Ziemssen's clinic. There was paresis of the right half of the body, right facial paralysis, left-sided cardiac hypertrophy, arterial sclerosis. Examination of urine showed a large amount of albumen, with some hyaline casts. Specific gravity 1003. Three weeks previous to this a double neuro-retinitis albuminurica had been observed. Symptoms of acute pneumonia occurred, which resulted in death. Post-mortem showed the right kidney enormously diminished in size; cortical substance markedly pigmented and diminished in area. Left kidney ten centimetres long, five centimetres broad, three centimetres thick; cortical substance diminished in area and characterized by disseminated points of pus of the size of a pin-head. Atheroma of the cerebral arteries. Apoplexies in both hemispheres. Perforating ulcer in duodenum, with consequent peritonitis.

The microscopic examination of the eyes showed the following changes in the retinal vessels: 1. An arterial vessel, cut somewhat obliquely in making the section, showed the lumen not materially changed, the endothelium normal, but the remaining coats not distinguishable, owing to a degenerative process. 2. On the same vessel another place was found in which the endothelium was not so distinct, and at one point no longer recognizable, as a conical, finely-granulated mass had worked its way into the lumen of the vessel; the vessel-wall is degenerated, as in the previous case, and the conical mass referred to seems to be the result of this change. 3. This molecular change in the vessel-coats seems to be generally characterized by the formation of round cavities or spaces, one observed suggesting very strongly an aneurismal character, but probably due to the melting of two or three spaces into one. 4. In one preparation the endothelium was forced into the lumen of the vessel by these cystoid spaces

filled with detritus, thus diminishing the calibre of the vessel. 5. The endothelium may be completely detached. These changes were noted in the main arterial trunk arterioles, and even careful examination of the capillaries showed slight tendency to the same degeneration.

The venous vessels showed no changes beyond a very wide lumen, a slight opaqueness (*verwaschen sein*) of their coats, and a light grade of infiltration towards the perivascular sheaths. These changes in the arterial system exist principally in the neighborhood of the papilla. Likewise in the choroid, especially in the circumpapillary region, the same arterial changes occur, but much more pronounced than in the retina. Sections of large arteries showed the lumen either entirely absent or extremely reduced in calibre, while the vessel-walls were very much thickened. Hemorrhage into the arterial coats, as well as collections of blood-corpuscles in the perivascular sheaths, was observed. In some cases the regressive metamorphosis was so pronounced that it was difficult to tell whether a blood-vessel section was being observed, or simply a "hyaline" product. The observations on the choroidal vessels of medium calibre were specially interesting, because they confirm the view which Köster and his pupils have emphasized,—that in the so-called arteritis obliterans the layer of vessel-wall which limits the lumen is attacked secondarily.

In the observations referred to, the endothelium was found intact, while the coats outside of it were attacked in the way already described, but careful study of the sections showed that the process started to the external side of the intima. The statement is not made that the intima and endothelium are never involved in this process, but rather that in arteritis obliterans the changes in the muscular tunic just as often induce closure of the vessel as those of the intima and endothelium, and that the primary change commences in the outer coats of the vessels. Another preparation showed the evidence of a tear in the vessel-walls. [This goes to show that the intra-ocular hemorrhages in albuminuric retinitis are not always per diapedesin.—H.] It is specially interesting to know that this arteritis is highly developed in the smallest arterioles of the choroid, and that the sections demon-

strated that the chorio-capillaris possesses a perithelial sheath; between this and the endothelial tube a lamellated mass was frequently observed, in some places showing a tendency to molecular disintegration; in others, masses of red corpuscles, some of normal appearance, others in a state of degeneration. An important question is in what tissue originate the degeneration-masses found in the vessel-coats. The observations seem to show that it is in the leucocytes, and the process may be designated as a leucocytic hyaline degeneration. The process begins with an hydropic degeneration of the leucocyte, the protoplasm loses its molecular (feinkörnig) structure, and is changed into a more or less homogeneous mass, and the nucleus degenerates. The red corpuscles can degenerate in a similar way. Not merely are, however, regressive changes found in the retina and choroid, but also production changes. New formations (neubildungen) were observed associated with destruction of the perceptive elements of the retina. Mingled with these new formations are here and there hyaline masses, which the intermixture of yellow-brown granules showed must have their origin in masses of red corpuscles. In none of the preparations from this case could the so-called sclerotic degeneration of the nerve-fibres be observed. The phenomena of arteritis obliterans already described were likewise observed in the vessels of the sclera, the corpus ciliare, the iris, and the conjunctiva. With this peculiarity, however, the complete obliteration of the vessels observed in the retinal and choroidal vessels was absent, except at the point where the scleral vessels join the choroidal system. In isolated spots in the iris thrombosis and complete closure of the vessel were observed.

Case II.—This case was a man, æt. 42, in whom a slight neuritis optici was observed several weeks previous to death. Post-mortem showed both kidneys diminished in size. Parts of the surface sunken in, with here and there a serous cyst. The microscope showed the change seen in the contracted congestion kidney (stauungsniere). The retinal changes in this case represented an early stage of the processes described in Case I. The muscular coat of the large arteries and also of the arterioles was oedematous and infiltrated with round nuclei (körnen). Also marked oede-

ma of the retina, especially in layers in which the blood-vessels lie. In many places, through these changes in the vessel-coats the lumina of the vessels are narrowed so that a single corpuscle would barely pass, and some were not permeable at all. The thrombotic condition of the arterioles and capillaries resulting from this existed especially in the immediate neighborhood of the optic disk, and especially in the nerve-fibre ganglion cell-layer and the inner granular (körnen) layer. As the result of this, a degeneration existed in these layers which is to be looked upon as a coagulation necrosis. This necrosis was likewise observed in the external granulated (granulite) layer. The choroidal changes were similar to those of Case I. With reference to the disputed question whether the ganglion-cells in the retina become degenerated in retinitis albuminurica, the author finds that they do.

Case III.—The clinical history of this case is unknown, beyond the fact that the specimen was taken from a case of albuminuric retinitis. The papilla, in contradistinction to the previous cases, was enormously swollen, its tissue-elements being pressed asunder by a serous infiltration. The changes in the vessel-coats, which were not limited to the vessels of any single membrane of the eye, consisted in an extensive cell-proliferation. It could not be observed that the tunica media was involved more than the other coats. As the result of this thickening the calibre of the vessels was diminished; in places the lumen was more narrowed than in others by a ring-like projection of the endothelium giving a nicked-like appearance to the vessel. This condition seemed to be more apparent in the nervous system, while in the arterial there was, as a rule, an even concentric narrowing. The cause of this thickening of the vessel-coats in addition to the above-mentioned cell-proliferation is an oedema of all the vessel-coats pressing asunder the elements.

Case IV.—Man, æt. 41. Interstitial nephritis; cardiac hypertrophy; marked albuminuria; specific gravity 1008; retinitis apoplectica et albuminurica. Death from pulmonary oedema, with lobular pneumonia. Post-mortem confirmed the diagnosis. Kidneys extremely reduced in size. The changes in the ocular sections were different from those in the last case, due, the author thinks, to their presenting

a much later stage of the disease. The thickening of the vessel-coats is generally missed, while hyaline degeneration of them is very common. Thrombi are numerous. As regards the nerve-tissue, the components of the opticus were markedly separated (zerklüftet), both in the region of the lamina cribrosa and to the retinal side of it. Numerous hemorrhages in the retina were observed.

Case V.—This was from a patient, 20 years old, with parenchymatous nephritis, cardiac hypertrophy with dilatation, marked atheroma of the brain-arteries, etc. The retinal and choroidal changes were essentially those of the previous case.

(To be continued.)

TRANSLATIONS.

THYMOL FOR TAPE-WORM.—As an excellent remedy for the expulsion of tape-worm, Dr. Numa Gampi proposes thymol or thymic acid. The physiological effects of thymol are very little known. Lewin claims for it germicide and antiseptic powers stronger than phenic acid. Bucholtz, studying its antiseptic properties comparatively, has shown it to be surpassed only by the bichloride of mercury; all the other antiseptics are inferior. Thymol does not confine its action solely to the inferior organisms. The method recommended by Dr. Gampi is as follows:

In the morning thirty grammes of sweet oil are given, and during the day eight grammes of thymol in twelve doses, to be taken one dose every fifteen minutes; twenty minutes after the last dose twenty grammes of sweet oil should be given.

During the administration of the thymol it is necessary to sustain the strength of the individual by cordial or stimulant, as cognac or rum, because the thymol exercises a depressing effect, according to the experiments of Huseman.

In *résumé*, the author recommends thymol for the following reasons:

1. It does not produce any disorder of the stomach or intestines, and its depressing action is easily controlled by the use of stimulants.

2. Its easy administration and rapidity of action, without requiring the classical three periods of preparation, expulsion, and after-treatment.

3. It is at the same time both a tæniage and a tæniacide.

4. In case of error of diagnosis, it will merely purge and disinfect the intestinal canal.

5. It may be supposed, from its action upon tænia which resisted all other remedies, that it would give very good results in the removal of any other worms that may be present.

6. Having given at all times the same unvarying result, the author thinks that we have at last in thymol a genuine specific for tænia.—*Il Raccolto Medico.*

THE JUGULATION OF TYPHOID FEVER BY QUININE AND WARM BATHS.—In an extended paper in the *Bulletin Général de Thérapeutique*, Dr. G. Pécholier reports eleven cases of typhoid pursuing a uniformly favorable course, making sixty-five cases treated by the same method without a single failure. He concludes that by its antizymotic action quinine associated with warm baths shortens or aborts typhoid fever, cases usually terminating in convalescence on the fourteenth or sixteenth day.

INFANTILE DIARRHœA.—Hayem has found that the green color of the discharges from the bowels of infants suffering with entero-colitis is caused by a microbe which secretes this green coloring-material. The disease is epidemic and contagious. The best manner of treating it is to give to the child a dessertspoonful of a two-per-cent. solution of lactic acid after each time of nursing.—*La France Médicale.*

TREATMENT OF TUBERCULOUS LARYNGITIS BY THE CURETTE.—M. Gouguenheim, in the name of M. Hering, of Warsaw, read a note of cases of tuberculous ulceration of the larynx treated by scraping. Twenty-eight cases were treated, which were divided into three classes. In the first category were nine cases of laryngeal and pulmonary phthisis; duration of cicatrization from three months to a year, without return. In the second there were, of cases of return after cicatrization, three cured. In the third there were six cases of ulceration of the nose, of the pharynx, and of the tongue, with a bad general condition; but still in two cases cicatrization occurred, which persisted until death.

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EDITORIAL.

THE HEREDITY OF TUBERCULOSIS.

NOW that the parasitic origin and the contagiousness of tuberculosis have become matters of demonstration, the question of the heredity of this disease enters upon a new phase. It is among the benefits of progress in science that questions unsettled by old methods of study may at least be reinvestigated by new methods. For the invention of the method goes before the discovery of the fact, and every approach to an unsolved problem by a new way tends to hasten its final solution.

That the children of consumptives frequently become tuberculous is incontestable. But how? Do they bring with them into the world the germ transmitted by their parents, or do they simply inherit a special morbid aptitude, which, acting as a predisposing cause, renders them peculiarly prone to the exciting cause, the contagion to which they are in a high degree exposed by their necessary association with their invalid parents?

Fircket, of Liege, who has recently investigated this question in the light of existing theories, although unwilling to formulate positive conclusions in the present state of knowledge, regards the following propositions as tenable:

1. The transmission of a disease from the mother to the foetus by way of the placenta occurs only when there is an infection of the blood, as in such maladies as anthrax, relapsing fever, and (probably) variola and syphilis.

2. In primary chronic pulmonary tuberculosis (pulmonary phthisis) the anatomi-

cal signs of parasitic blood-infection are absent in more than half the cases. When this infection is observed it advances by degrees, little by little, in a manner wholly different from the infection of charbon. Complete infection corresponds to acute miliary tuberculosis.

3. Congenital tuberculous infection by way of the placenta must be regarded as possible, and seems to explain certain cases of congenital tuberculosis primarily developed elsewhere than in the lungs. The frequency of this condition needs to be investigated. But congenital tuberculosis has no special predilection for the lungs, and the fact that these organs are the seat of predilection for primary tuberculosis appears to prove that primary pulmonary tuberculosis is not ordinarily due to congenital infection by means of the blood from the placenta.

A CONGRESS OF CREMATIONISTS.

THE rest of mankind, who are disposed in an uneasy way to jest at undertakers, affect to be amused at the annual conventions of the Association of "Funeral Directors." This affectation of levity, which at best is forced, must vanish upon the announcement in the journals of an International Congress of Delegates from the Societies and Friends of Cremation to be held at Milan next September. The disposal of the dead in such a manner as will do no violence to the prejudices or the health of the living has become in the great centres of population an urgent problem. In so far as funeral directors' conventions tend to the diffusion of useful knowledge relating to the care and preservation of corpses, the prevention of contagion, and the decent ordering of funerals, they serve a useful purpose. Nor would we discourage the social aspect of these gatherings, the transient relaxation from habitual perfunctory professional sadness of manner, or some banqueting and

general good-fellowship. But we protest against all combinations to magnify the pomp and circumstance of obsequies, and to raise the cost of dying, which is one of the prime necessities of life.

The Milan Congress will doubtless lead to practical results in stimulating inquiry and diffusing information in regard to the subject of the disposal of the dead even among those who are opposed to cremation; it will reawaken an interest in cremation, which appears just now, especially among the English-speaking races, to be flagging; but its chief work will be among those already interested in and committed to cremation itself. That it will exert any influence in allaying ecclesiastical opposition is not probable, nor does it seem likely that the medico-legal objections to this method will be fully met. Yet, as it will consist largely of men of science from various points, and as its scope includes the hygiene of cemeteries, it is to be hoped that much good work will be accomplished.

The programme includes reports on the progress of cremation among the different nations, a plan for an international league among the cremation societies, proposed international legislation in the matter of the transportation of cadavers from one country to another, and in regard to their incineration and the preservation of the ashes, from the stand-point of public hygiene and legal medicine, and, finally, the consideration of the different systems of cremation in their technical, moral, hygienic, and economic aspects. There will also be held, in connection with the Congress, an exhibition of models, plans, machinery, instruments, apparel, books, laws, and other matters illustrating the subject in its historical and its present aspects.

SPERMACETI, FATTY ACIDS, AND SOAPS AS DIETETIC AGENTS.

MANY persons have an unconquerable repugnance to cod-liver oil and other fats used as food in wasting diseases.

Others fail to digest fat properly, and hence in many cases digestive disturbances result when the administration of fat is attempted.

In normal fat-digestion these substances are decomposed into the fat-acids and glycerin, and the liberated acids combine with the alkalies with which they come in contact in the intestinal canal and form soluble soaps, which are easily absorbed.

The researches of Immanuel Munk have shown that the fatty acids alone are competent to produce the nutritive effect of fat, and that the glycerin with which they are in combination is not only unnecessary, but sometimes injurious.

Bearing these physiological facts in mind, Professor Senator has studied the effects of spermaceti, pure fatty acids, and soaps as substitutes for cod-liver oil and other fats in the treatment of cases characterized by deficiency of fat or rapid wasting of tissue.

According to Senator, spermaceti was formerly much used as an internal medicament in coughs and other irritable conditions of the throat, especially in children. He uses it, however, frequently as a substitute for cod-liver oil. When finely pulverized and mixed with sugar and flavored with some essential oil, as oil of lemon, it can be taken in teaspoonful-doses without producing any nausea. It is, in fact, quite palatable. Two and a half to five drachms of the spermaceti may be taken in the course of the day, and thoroughly digested and absorbed.

The pure fatty acids are given in a mixture of palmitic and oleic acids, two of the former to one of the latter. This mass can be made into pills, which, if keratinized, pass through the stomach unchanged, and are dissolved in the secretions of the intestinal canal and there readily absorbed.

Senator regards the saponified fat-acids (soaps, in short; soda soap; *sapo medicinalis*) as preferable to either fats or pure fat-acids. Being already in a soluble and

absorbable condition, they make no demands upon the digestive capacity of the intestine. The soap is given in pills, capsules, keratinized pills, or powdered and mixed with sugar and flavored. Senator has used soap in this manner in diabetes, phthisis, obstructive jaundice, cirrhosis of the liver, carcinoma of the stomach, and similar diseases, either of a wasting character or where a deficiency of biliary or pancreatic secretion interfered with the normal digestion of fat. He compares soaps to artificial peptones: the former are pre-digested fats, as the latter are pre-digested proteids. They relieve the over-worked or weak digestive organs by supplying the required nutriment in a form ready for absorption.

NOTES FROM SPECIAL CORRESPONDENTS.

THE GERMAN CONGRESS OF PHYSICIANS.

YOUR correspondent has just returned from a trip to Wiesbaden, to attend the sitting of the German Congress for Internal Medicine, which was in session there April 13, 14, 15, and 16. This was the sixth annual sitting of this Congress, and was one of unusual interest and profit. It was a very representative body of German medical men. It included among its numbers also physicians from Austria, Switzerland, France, Holland, and the United States.

Professor Nothnagel, of Vienna, read a paper on *The Localization of Brain-Diseases*, which was discussed at length by Dr. Curschmann, of Hamburg.

Professor Ruhle, of Bonn, read a paper on *The Heredity of Tuberculosis*. The speaker observed that from its very commencement the Congress had been busy with the question of tubercle-bacilli. The Congress has in a manner grown with this question, and it seems its duty not to allow it to become cold. The great discovery of Koch was made just before the opening of this Congress in 1882, and published at its first meeting. It is not to be questioned that the true tubercular poison can originate in the body. As long as tuberculosis has been discussed, heredity has been considered as influencing its propagation. There are two aids to acute infection,—the poison itself, and a suitable ground to receive it.

The speaker then asked how the poison gained entrance into the human race through heredity. This was investigated by Baumgärtner, in 1883, who was of the opinion that the poison penetrated the ovum by way of the semen; that it remained latent in the child ten years or more, and then made its first appearance. The speaker was of the opinion that this theory stood on a very weak basis. The most frequent manner of contracting tuberculosis is from a diseased person through the sputa, and also through the glands, exfoliations of the skin, or any way in which the poison may appear on the surface and be transported by means of pocket-handkerchiefs, washing, etc. The speaker was convinced that the communication of the disease to healthy persons from those affected does not take place through the air. This is an idea which had been demonstrated to no one. Were this true, we could not enjoy life, but would be in continual fear that through some unfortunate breath we might contract the dread disease. The fact that the attendants in hospitals who have the care of consumptives are seldom attacked with the disease leads the speaker to conclude that it is not the air through which the germs are carried, but that it is communicated in another mode,—in fact, the way in which the members of the family kiss and fondle the patient and handle his linen. From one member of the family the tubercle goes to another. Instances can frequently be found on inquiry where the parents transmit the disease to their children. In such cases the family physician should put in his word of warning. The speaker would like to summon his colleagues in practice to take this position in regard to the disease and treat it from this stand-point. It is possible that we will find that the so-called cases of heredity do not need to receive their predisposition through the semen or the mother's blood. If this be acknowledged, then the theory becomes very unreasonable.

The speaker wished further to say that we should hold ourselves aloof from the idea that certain things will bring about certain forms of the disease. For instance, that pulmonary phthisis comes through inhalations, tuberculosis of the alimentary canal through the nourishment, etc. That is only a notion; and when two points are considered,—namely, that scrofulosis is also tuberculosis, and undoubtedly the poison of the tubercles can remain latent an indefinite period,—then we can understand that it is not so simple to lay the origin of tuberculosis to an inhalation of air or to any special primary cause. When a child had acquired a glandular tuberculosis and this heals, and then after fifteen years he becomes tuberculous, according to the opinion of to-day we must believe he had it latent in his system all this time.

The speaker closed his paper with the sentence, "We shall abandon the theory of he-

redity as so far understood, and in its stead place the theory of infection, the family tuberculosis, and closely observe the scrofulosis and latency."

Professor O. Fraentzel, of Berlin, did not agree with the essayist in the statement that the attendants on the tuberculous in hospitals were not infected. He had often made the observation that these attendants died of the disease. He reported from his practice in the Charité at Berlin five such cases.

Professor Lichtheim, of Berne, made an interesting report on *The Coincidences between Pernicious Anæmia and Tape-Worm*. From the cases of this kind which the speaker had observed he has come to the conclusion that tape-worm (*Bothriocephalus latus*) plays no great part in the causation of disease, yet it has its rôle. This, however, is different in the regions about the Baltic, where the people feed largely on fish. The speaker then went *in extenso* into the subject of coincidence of pernicious anæmia with changes in the spinal cord. He had found the anæmia to be the cause of the disease of the spinal cord in two cases in which there was degeneration of the posterior fasciculi of the cord. He related the results of his investigations. The observations he had made lead him to believe the transfusion of blood to be of little use, and that the infusion of salt is dangerous to patients with advanced anæmia.

Professor Rindfleisch, of Würzburg, read a very scientific study of *The Pathological Anatomy of Tabes Dorsalis*, which was listened to with great attention and received with applause.

Dr. Dittweiler, of Falkenstein in Taunus, read a paper on *The Therapeutics of Pulmonary Phthisis*. He had made the disease a life-study, and his paper was very interesting, though quite lengthy. He thought that much more than half of the cases of bacillary phthisis might be completely healed, and by proper care might remain so.

The second gentleman to read on this subject was Professor Penzoldt, of Erlangen, who started with the statement that pulmonary consumption can be healed. After proving this to his own satisfaction, he discussed the question, What can prevent pulmonary phthisis? He answered this from the stand-point that its origin is nothing less than an infection coupled with a predisposition.

1. In the battle with the numerous and invisible tubercle-bacillus, which is scattered broadcast over the whole earth, the chance for its eradication or control is but slight: one can but hope that the government may take in hand this most dangerous of diseases, as it has taken others.

2. We should seek to render harmless the foyer of development of the bacilli in tubercular patients: the possibility of direct infection has long been known from clinical observation. This origin of the disease, for-

tunately, however, is infrequent. Though this danger is small, yet it exists. On this account it is the duty of the physician to call attention to the danger of intimate relationship with these patients. He must also insist on the greatest cleanliness in the care of the sick, freedom from sexual connection, and unnecessary intimacy in their attendants. The physician should speak out boldly against the marriage of the tubercular, and especially insist on the rules which have been based upon our knowledge of infection. It is more nearly possible to remove the danger of infection on the part of the patients in hospitals. Consequently there must be a hospital for consumptives, or a department for them. The State should watch with the greatest care cattle suffering from murrain, as there is danger of infection from them. The well cattle should be regularly examined with respect to murrain, especially the udders; the diseased animals should be removed, and, where it is possible, destroyed. The most careful examination of animals slaughtered and of the meat put upon the market should be made by competent medical authorities.

3. One must seek to prevent the people from forgetting the danger of infection; especially this must be the case with those who are predisposed, though others are also in danger. The nursing of children by tuberculous mothers or wet-nurses, as well as kissing and tending by tuberculous nurse-girls, should be positively forbidden.

Of great importance is the keeping up of the power of resistance through very rich nourishment, especially meat-diet: the carnivorous animals are less liable to tuberculosis than the herbivorous. The skin and mucous membrane should be hardened; the muscles should be developed, as well as the lungs and the heart, and the respiratory organs protected from dust. The choice of business of the patient is of the first importance: those employments which insure plenty of fresh air—farmer, woodman, gardener, sailor, etc.—are to be recommended. For those who already have the disease the rules of life are in general the same as for those who have inherited the tendency.

The essayist now turned his attention towards the particular curative therapeutics of phthisis. There is, he said, no specific remedy for phthisis. On this account the greatest weight is to be placed on careful attention to the body. In the foreground is the air-treatment. Fresh, pure air, wherever found, must be used with faithfulness; the most curative is the place where little or no phthisis pulmonum is found, or where many have already been cured. Parallel with the air-treatment stands the rational nourishment. The nourishment must be rich as possible, principally albumen easily digested, and must be taken often,—six or seven times a day. The third in order to be recommended is bodily

exercise. The physician should watch over this closely to see that it is carried out. Walks, cautious climbing of mountains, gymnastics in the open air, are especially to be advised. As a fourth point, the hardening of the skin in the case of stronger patients should not be neglected. Lastly, the mental treatment is to be recommended. The physician should encourage the anxious, cheer the despondent, but especially hold the reckless in check. The best guarantee for the carrying out of these rules is the treatment in a hospital in a place possessing as great immunity from the disease as possible. For poor consumptives there is nothing better than good hospitals. The speaker begged his hearers to encourage, wherever possible, the founding of hospitals for phthisical patients in places fitted for them. In the latter part of his address he discussed the medical treatment of phthisis.

The subject of the therapy of phthisis pulmonum was then opened for discussion.

Dr. Brehmer, of the Hospital for Consumptives in Görbersdorf, concurred with the sentiments just expressed. He thought that the tubercular bacillus had given the therapy of phthisis a firm basis. The speaker dwelt particularly on the fact that the question of the immunity of a place is of the greatest weight, even from the stand-point of the believers in the theory of infection. They must, however, be proved certainly to be such by statistics. Such places may be found especially in mountains. Fresh air is there,—also of great assistance. The immunity does not depend wholly on the height, but also upon the geographical position of the place. Indeed, the height must be the greater the nearer the equator it lies. According to Guester, immunity is found in the Austrian Alps only in those places where at a height of more than two thousand four hundred feet the foundation of slate and the ozone regular in amount are to be found. The speaker then gave a brief résumé of his monograph on the subject, published by Bergmann, of Wiesbaden.

The President, Herr Geheimer Medicinal-Rath Professor E. Leyden, of Berlin, in his address laid down the programme of the Congress, and said much in review of what it had done and should do. Every physician knows to what a great extent the medicine of to-day has to thank the natural sciences; he knows that science alone has saved medicine from the pool of arbitrary and inhuman speculation, and founded it anew on the basis of well-grounded facts. The physician must be a searcher of nature. He must learn to observe, prove, and sift the causes of disease in a scientific manner. The task of the physician is, however, not yet exhausted. He has besides the scientific problem a practical side to which he must attend; medicine must be helpful, useful. Those who are inclined to elevate the scientific above the practical must acknowledge that medicine has not a scientific

speculation, but a practical demand, to thank for its origin. Every one who has chosen the calling of a physician must undertake the accompanying duties with conscientiousness. He must bring to his assistance in the treatment of his patients all the knowledge and means which in his time medicine will command. Medicine will give up its historical culture and social consideration when it fails to keep in full view this original aim, or even allows it to be placed in the background. It remains our special duty to use the proper remedies for the accomplishment of this task. Medicine must be independent, quite sovereign in this endeavor. To her there is no dogma. Consequently the problem of medicine is not only that of the natural sciences, but there is also another problem which must be solved independently. Above all things, we must not allow the consciousness of the importance of our art to fail us, for medicine is distinguished before all the natural sciences, because she deals with the well-being of our fellow-men. "In this branch of the natural sciences which is called medicine," says C. Hüter, "is prominent the tendency to preserve the life and utility of man." This task gives to our profession her especial importance. Our time is eminently practical, and knowledge should be useful. This practical part is also a beautiful duty which one must fulfil. The field of the laboratory is to study the particular primary causes of disease, to investigate them in their laws, their connections, their actions. Still the experiments remain one-sided necessarily in that only one or few of the appearances are brought out; the great number of symptoms we can only learn at the bedside. The address concluded with some excellent advice to the Congress, and was followed by loud and long-continued applause.

The Pathology and Therapy of Whooping-Cough.—Professor A. Vogel, of Munich, discussed this subject. Pertussis was classified by Gerhardt among the infectious diseases; yet the contagion of whooping-cough is of another nature than that of the acute exanthemata. As concerns the symptomatology, the great clinicians of the last century presented a gastro-pathological theory. In the beginning of the present century the neuro-pathological theory had many followers, but this also fell to the ground as unsuccessful as was the attempt to prove whooping-cough to be a simple bronchial catarrh. There now remains no doubt that it comes under the list of infectious diseases. The essayist here recalled the decision of Linnaeus, that the cause of whooping-cough was the inhalation of a contagium animatum, and related the latest revelations of the laryngoscope in the hands of Herffs, of Darmstadt, and likened it to the ideas of Beau, Rehn, Meyer of Hum, and Rossbach. The first found the whole throat hyperæmic, the others found only the posterior

walls to be constantly diseased. The essayist proceeded in relation to the pathological anatomy, saying that in pneumonia following measles and whooping-cough great numbers of microbes were seen by Theon in the pus and lung-cells of the exuded matter, and indeed in whooping-cough pneumonia he had found diplococcus and bacilli in greater numbers than in diphtheritic pneumonia. Marshall described two cases where whooping-cough was complicated with aphasia, stupor, convulsions, and hemiplegia. Wagner reports a case of subcutaneous hemorrhage in a lively five-year-old boy with whooping-cough. In some instances it is a cause of deafness. In the case of a nursing child it is a dangerous and pernicious disease to contemplate; in older children the course of whooping-cough is favorable throughout. In an epidemic in Würzburg, fifty-two children under one year were taken ill, and thirteen, or twenty-five per cent., died; two hundred and forty-six were attacked between one and five, and twelve, or four and six-tenths per cent., died; between six and fifteen years, eighty-seven, of whom one only succumbed. The author lamented that the mortality tables followed the age so closely, notwithstanding the therapeutics. The remedies recommended for whooping-cough are of two great classes,—antispasmodics and disinfectants. In treating the spasmodic cough by narcotics, one resigns every chance of shortening the process; opium or any of its preparations should not be given for any length of time continuously; however, a small dose of opium or morphine is a great relief to children who have passed sleepless nights. A combination of cannabis indica and belladonna is especially recommended by Vetter-sen, of Humar. Of one hundred and sixteen children, eighty-three showed a favorable result; of these, eighty were completely cured in from eight to fourteen days. Prior and P. Palt recommended the painting of the oral cavity with a solution of cocaine from ten to twenty per cent.; the application of cocaine is not entirely without danger, however. The antiseptic treatment strives to shorten the attack by destroying the germs of the disease. A residence in gas-factories, where the distilled product of the hard coal acts favorably on the mucous membrane of the respiratory apparatus, is first to be recommended. This mode of treatment is sometimes inconvenient. The same gases can be generated in the sick-room by the use of benzine and carbolic acid. After frequent experience, the author did not depend much on this treatment. The inhalations recommended by Pick, of Coblenz, in which fifteen to twenty drops of pure carbolic acid are placed in a cotton ball and inhaled, will be endured but a short time by any child. For general disinfection of the sleeping-room of the patient, Mohn burns twenty-five grammes of sulphur matches to each cubic metre of space. Further investigation

in this line is to be recommended. Michael, of Hamburg, blows into the nasal cavities through a glass rod, twenty centimetres long, some powdered resin of benzoin, and besides this uses sulphate of quinine or nitrate of silver in a ten per cent. mixture with lard. The reports from this treatment in the hands of other physicians are favorable. Concerning psychical treatment, nothing new has appeared in recent literature. No followers have been found for the opinion that whooping-cough can be cured only by the rod, fortunately for the poor little patients.

The second paper read on this subject was by Professor Hagenbach, of Basle. He gave a large number of statistics. Two hundred and forty thousand children have the whooping-cough every year in Germany; in Basle, one thousand per year, with twelve deaths; in Geneva, eleven deaths; in London, thirty-six; the rest of England, twenty-two. The mortality is, on the average, four or five per cent. Toplitz reports the mortality from this disease among the children of the Polyclinic, in Breslau, in the years 1875 to 1885, as 7.90 per cent. In Basle, during the last eleven years, the mortality among children under one year has been 26.8 per cent.; from one to two years, 13.8 per cent.; two to five years, 3 per cent.; five to ten years, 1.8 per cent.; ten to fifteen years, 1.8 per cent. These figures show that whooping-cough is a serious disease for the tender years of childhood. With the greatest mortality we have also the most complications.

But what is whooping-cough? The recent investigators are about all united that it is an infectious disease. It comes epidemically, seldom sporadically. In large cities it is endemic and contagious. In whooping-cough we have a catarrh of a certain part of the mucous membrane of the respiratory tract which is connected with the immigration of fungi. At these places, through irritation of the ending of the superior laryngeal nerve, the attacks of coughing are brought on by reflex action.

Professor Hagenbach then discussed the question whether we have to deal with a local or a blood infection. He related the different positions held by Letzerich, Colston, Guéneau de Mussy, Herif, Rossbach, Meyer of Hum, Lori of Pesth, Rehn, and Baginsky.

The following may be said with positiveness concerning the nature of the contagion. The liability of the human race to this special poison is general. The disease is most frequent in the first year of life, and is found with rarity in the first months. The susceptibility is great up to the tenth year, after which age it becomes less. It is contagious in the first and second stages. So long as mucus is produced, the disease may be carried. Outside of the human body the contagium seems to be unable to exist for any length of time. The reader then discussed the prophylaxis. Schools for small children should be carefully

watched, and children with suspicious coughs kept away as long as they cough in paroxysms. The expectorated material must be carefully removed. If the disease spreads, the school should be closed. The changing of air and place for children infected with whooping-cough is often the cause of an epidemic in places free from the disease. The author then proceeded to treat of the therapeutics, much of which he found defective.

Dr. Michael, of Hamburg, discussed the subject, and recommended a method used by him, in which he blew powder into the child's throat, and gave statistics of his success. In more than one hundred cases so treated he had more or less improved seventy-five. In twenty-five cases, no success at all; in fresh cases his method proved satisfactory, and also in those which had lasted six weeks. The speaker laid more stress upon the qualitative improvement of the cases than on the duration, and circulated through the Congress charts giving the course of the disease under the use of different remedies.

Professor Heubner, of Leipsic, considered the character of the disease to be that of a virulent catarrh, and not a blood-infection. He also exhibited charts showing the numbers of attacks of coughing per day: like the former speaker, he thought it possible to render these attacks fewer and lighter, and eventually to cause the shortening of the disease and its cure.

Dr. Schliep, Sanitäts-Rath, Baden-Baden, recommended the treatment by the pneumatic cabinet which he had used. The increased pressure of air in this cabinet acted mechanically as a sedative on the mucous membrane and increased the inhalations of carbonic acid gas. He found twelve to twenty sittings sufficient to cure a child suffering from whooping-cough. As a further remedy he recommended an emulsion of four grammes of turpentine. He also had good success from smoking the room well with sulphur, twenty-five grammes to the cubic metre of the room.

Dr. Sonnenberger, of Worms, advised the use of antipyrin. He had used it in an epidemic in Worms and vicinity with success. It immediately rendered the attacks milder and shortened their duration.

Dr. Cohen, sanitary officer for Hanover, spoke of the favorable results from inhalations of bromide of potassium, also of the use of the musk preparations.

Professor Unverricht, of Jena, considered the subject of *Experimental Epilepsy*. The lower half of the cortex of the brain contains the centres for the occurrence of epilepsy. Irritation of the cortex will cause attacks of epilepsy. The speaker knew, from experiments he had carried out upon a dog, the importance of the motor region for the muscular spasms.

Professor Rossbach, director of the medical clinic of Jena, read three short addresses: (1) concerning the physiological meaning of the

leucocytes which emanate from the tonsils and the follicular glands of the tongue; (2) concerning chyluria; and (3) concerning a *breathing-chair for emphysematous and asthmatic patients*. While till now it has been necessary to use manual treatment of the thorax in order to lighten the severity of asthmatic attacks, a stool had been invented by a patient of the speaker, which enabled him to breathe compressed air without manual aid. The patient takes a seat on the chair and buckles about his chest a girth which is made fast to the stool; on both sides of the chair two arms are situated which the patient moves forward, and which movement tightens the girth four centimetres. By means of this continuous moving of the arms of the chair the patient is enabled to relieve himself. The professor had used such a stool six months in his clinic, and had improved several cases. The advantage this chair has over manual treatment is that through this band the whole thorax is regularly compressed, which is impossible with the hand. Besides, the physician or attendant will be able to carry out the manual treatment for more than half an hour, while the chair can be used as long as desired. Also, this instrument is always at hand for attacks in the night or any time when manual aid may not be available. The professor presented the chair and the patient who had invented it before the Congress, and retired amid great applause.

Professor Schreibe, of Königsberg, related how he had attained the same results through a more simple way,—viz., through elastic corsets.

(To be continued.)

BALTIMORE.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION—A PUBLIC MORGUE—PLEURO-PNEUMONIA AND INFECTED DAIRIES—DIRECTORIES FOR NURSES.

THE Fourth Annual Meeting of the American Climatological Association has just been held in this city. About thirty members were in attendance. Nineteen papers were read, about three-fourths of which treated of climatological subjects, while the remainder were devoted to laryngological or pulmonary topics. To what division of climatology the rectal injection of sulphuretted hydrogen, or the local treatment of the respiratory passages by a spray of Dobell's solution, belongs, does not seem very clear to me.

Some of the papers and discussions possessed considerable practical value, in spite of their apparent inappropriateness on the programme. To this class belongs the paper of Dr. Shattuck on the importance of alimentation in phthisis, illustrated by charts showing the increase of body-weight, and the clear statement of Dr. E. T. Bruen of the scope,

value, and methods of gaseous injection in the same disease.

The subject chosen by the President, Dr. Frank Donaldson, Sr., for his annual address was "Prophylactic Treatment of those who inherit a Predisposition to Phthisis." The question of the hereditary transmission was discussed, the rational position being assumed by the speaker that the disease itself could not be transmitted, but only a predisposition,—a condition of the system which rendered it more vulnerable to the attacks of the specific cause of the disease whenever that gained access to the tissues which are usually the point of attack. Efforts should be directed towards increasing the resisting power of the individual to the cause of the outbreak.

Dr. James R. Leaming read a paper on "The Philosophy of Climatic Treatment of Diseases of the Chest." Dr. Leaming thinks it an advantage for patients affected with this class of diseases to change their abode frequently, in order to take advantage of the improvement generally gained during the first two weeks. Instead of a permanent place at the sea-side for the season, the speaker advised that patients should begin at the northernmost resorts on the Atlantic coast and gradually work southward, stopping two or three weeks at each place. For such patients as could not afford the expense of the present resorts he suggested the establishment of government sanitaria, where the advantages of climatic treatment could be obtained at a nominal cost.

A paper of much interest was read by Dr. R. G. Curtin, of Philadelphia, who pointed out the different manners in which cases of syphilitic phthisis react to sea-air. He detailed five cases of this disease in which marked improvement resulted from prolonged exposure to sea-air, which is contrary to the usual effect of sea-air upon tubercular phthisis.

Most of the climatological papers seemed to be intended to boom certain health-resorts. In fact, the criticism was made in my hearing that the Association seemed to be a convention of persons interested in the development of special sea-shore sanitaria and mineral springs.

A paper by Dr. A. L. Loomis on "Evergreen Forests as a Therapeutic Agent in Pulmonary Phthisis" was an attempt to discuss the climatological problem from a scientific stand-point, and, as such, was fairly successful. Dr. Loomis, however, in discarding the rapidly-dying ozone theory, seems to have overburdened the peroxide of hydrogen hypothesis. As he himself acknowledges, there is a wide difference between elementary meteorology and medical climatology. But without a knowledge of the former no opinion upon the latter is worth much. To an outsider it looks as if a little study of the elements of meteorology beyond what is found in school-books of natural philosophy would

be of benefit to some of the members of the Association before they begin to grapple with the more complicated problems. Of course these remarks do not apply to Dr. Loomis.

Nineteen new members were elected.

The following officers were chosen for the ensuing year:

President, A. L. Loomis; Vice-Presidents, A. Y. P. Garnett and J. T. Whitaker; Secretary and Treasurer, J. B. Walker.

The Council consists of E. T. Bruen, J. H. Tyndale, F. H. Bosworth, F. C. Shattuck, and Roland G. Curtin.

The meetings of the Association were held in the beautiful new lecture-hall of the Johns Hopkins physical laboratory.

For a number of years the profession has been active in endeavors to have a public morgue established in this city, but the economy of the City Council or of the Mayor for the time has always rendered all attempts nugatory. Last year the College of Physicians and Surgeons offered to erect and keep in order a morgue, provided a lot of ground adjoining the College and belonging to the city would be sold at a fair price to the College. The Council passed an ordinance to that effect, but the Mayor and Controller, who were authorized to fix a price to be paid for the lot, named such an exorbitant figure that the College declined to have anything to do with it.

About a week ago the trustees of the Johns Hopkins Hospital offered the use of one of their buildings as a public morgue, under the following conditions: "1. The post-mortem examinations at the morgue shall be made by a physician designated by the trustees of the Johns Hopkins Hospital, and appointed, without salary, by the city for that purpose. 2. Post-mortem examinations shall be permitted in all cases where deemed necessary by this physician. 3. The transport and burial of the bodies are to be provided for by the city. 4. All dead bodies which it is customary to send to a public morgue, such as the bodies of unknown dead and those of medico-legal interest, are to be sent to the morgue. 5. Permission to inspect bodies at the morgue shall be obtained by certificate from the health office and the police stations. 6. Unclaimed bodies, as a rule, need not be kept at the morgue longer than ten days, their clothing and effects longer. 7. Special and extraordinary expenses, such as those pertaining to chemical examinations in criminal cases of death by poisoning, are to be borne by the city. 8. The arrangement contemplated in this offer to the city of a morgue by the Johns Hopkins Hospital shall take effect October 1, 1887, and shall continue not less than three years, as the first outlay will be large. The motives which induce the trustees to make the foregoing proposition are: first, the desire of making the hospital as useful as possible to the city; second, the belief that the work

which should be done in a morgue, and the methods which ought to be employed in medico-legal autopsies, are subjects for which it is very desirable that systematic and skilled instruction should be given for the benefit of justice and of the public; third, the desire that the medical department of the Johns Hopkins University, with which the hospital is closely connected, may be able to give this instruction in a thoroughly satisfactory manner."

This is an extremely liberal proposition, but there are certain legal difficulties in the way, which will probably prevent its acceptance. As the second and seventh conditions would conflict with the duties and privileges of the coroners, who are State officials, it looks as if the city would be deprived of the advantages of a public mortuary chamber until our municipal rulers can be made to see its importance.

Quite a sensation was created here last week by the State Veterinary Bureau, which seized upon a dairyman's stable and killed all the cows found upon the premises on account of pleuro-pneumonia. It is said the post-mortem examination verified the diagnosis of pleuro-pneumonia in some of the cases. The authorities would have been justified in breaking up this man's business even if no pleuro-pneumonia existed in his herd, for I have been informed that the filthy and unsanitary conditions under which the cows were kept made it impossible for these animals to retain their health. Pleuro-pneumonia has been quite prevalent in some parts of this State, and all the power at the command of the national and State authorities is being invoked to stamp it out. Infected herds are promptly quarantined, and diseased animals killed. It is hoped soon to exterminate the epidemic here.

We have now two directories for nurses,—one managed by the Medical and Chirurgical Faculty, and a recently organized one under the auspices of the Woman's Medical College. The latter is, in connection with the Training School for Nurses, managed by the College.

G. H. R.

June 1, 1887.

PROCEEDINGS OF SOCIETIES.

AMERICAN SURGICAL ASSOCIATION.

(Continued from page 576.)

Second Day, Morning Session.

THE Committee of Conference with reference to the proposed Congress of American Physicians and Surgeons reported that they had attended the meeting of conference held in Washington, September 24, 1886, which adopted the following resolutions:

"Resolved: 1. That it is desirable that the following special Societies—the American

Surgical Association, the American Ophthalmological Association, the American Otological Association, the American Neurological Association, the American Laryngological Association, the American Gynaecological Association, the American Dermatological Association, the American Climatological Association, with the Association of American Physicians—shall arrange for a conjoint meeting in the city of Washington, September, 1888, and subsequently at intervals of three years at the same time and place.

"2. That this arrangement shall not interfere in any way with the autonomy of each special Society, and that each Society shall retain the right to withdraw at any time from this conjoint scheme.

"3. That the special feature of the meeting shall be the conjoint assemblage of the special Societies on two evenings during the session, on one of which there shall be an address delivered by the President of the conjoint meeting, and on the other there shall be communications by a referee and referee on some subject of general professional interest.

"4. That each special Society approving this report is invited to appoint one representative (with an alternate), and that the representatives so appointed shall constitute an Executive Committee, to serve for one year, with power to select such officers for the first conjoint meeting as may be deemed necessary, to propose a programme for said meeting, to make all other arrangements, and to prepare and submit a plan of organization for future meetings.

"5. That all expenses connected with the conjoint sessions shall be apportioned equally by the Executive Committee among the special Societies participating.

"Owing to the views entertained by the Committees of the Ophthalmological and Dermatological Associations with regard to the interval of times of meeting, they abstained from voting upon the first resolution."

The report was adopted, and Dr. C. H. Mastin, of Mobile (with Dr. J. Ford Thompson, of Washington, as alternate), was appointed as the representative of the Association.

The following were appointed as the Nominating Committee: Drs. J. Collins Warren, J. H. Brinton, T. F. Prewitt, N. P. Dandridge, and D. W. Yandell.

The Treasurer, Dr. P. S. Conner, reported a balance of \$738.46 in the treasury.

DISCUSSION UPON SUPRA-PUBIC LITHOTOMY.

The discussion of papers read on Wednesday was then taken up.

Dr. W. T. Briggs, Nashville: Dr. Dennis, in his paper, held that the time would come when supra-pubic lithotomy and litholapaxy would practically be the only operations per-

formed for the removal of stone. His idea was that no special operation is applicable to all cases. The surgeon should have all operations at his command, and should select the one adapted to the particular case. In certain cases, such as large stones, or deformities of pelvis and lower extremities, supra-pubic lithotomy is undoubtedly the best operation. There is, however, no reason why, in ordinary cases of medium-sized stones, the perineal operation should not be adopted. He regarded this operation as the best, as the external wound permits dilatation to any extent. The neck of the bladder is usually resistant, but by making a lateral incision of three lines on each side of the prostate gland, with gradual dilatation, the opening can be enlarged to an extent sufficient to permit the removal of any stone that should be removed through the perineum. A number of stones (varying from one to one and a half inches in diameter) which had been removed in this way, with recovery of the patient, were then exhibited by the speaker. There is no reason why crushing a large stone should not be combined with the medio-lateral operation. The operation is easier than the lateral operation. Incision in the manner mentioned, with the removal of all stones at once, he thought, would have a less mortality than litholapaxy.

Taking all kinds of cases at all ages, his first seventy-four cases were operated on by this method without a death. Then he had two deaths: in one a pelvic abscess complicated the case, and in the other there was scrofulosis. Forty-six cases were then operated on without one death. One did die three months after operation with general tuberculosis, but with the wound united. It is probable that in properly prepared patients without organic disease the mortality will be nothing. In the last two years he had operated upon six old men, at an average age of sixty-six years; all recovered.

Dr. Hayes Agnew: As Dr. Briggs has said, we cannot commit ourselves positively to any one method. The median is undoubtedly the safest operation through the perineum. The only damage likely to be done is in extraction, but this can be avoided by nicking the neck of the bladder, which allows distention to almost any extent. Where the stone is large, and yet is one which should come through the perineum, an incision may be made on each side. Drainage is more readily effected by the perineal operation. With proper antiseptic precautions the success of this operation will be even greater than at present. In cases of large stone the high operation is the best. When one has operated year after year through the perineum, as Dr. Briggs and others of us have done, with almost universally successful results, he is indisposed to give up what he believes to be a well-tried method for one which is a comparative novelty.

Dr. J. R. Weist, Richmond, Indiana, after seeing Dr. Briggs perform the medio-bilateral operation, had adopted this method in eight cases, all of which recovered. With one exception, all the patients have been old: this one was twenty years of age, from whom a mulberry-calculus weighing five hundred and twenty grains was removed. The next youngest case was fifty-nine years old, eight stones being removed. In another case, seventy-two years old, twenty-two stones were removed. From the accounts of the supra-pubic operation given yesterday, he inferred that the operation is more difficult of performance than the one described by Dr. Briggs.

Dr. H. H. Mudd, of St. Louis, said that his first operations were performed by the perineal method with good results. He subsequently adopted litholapaxy, which in the majority of cases takes the place of the perineal operation. The supra-pubic operation is of service for the removal of certain large stones and for exploratory purposes. In considering this operation, it must be borne in mind that the existence of contracted bladder with adhesions will render the supra-pubic operation difficult or impossible.

Dr. J. Collins Warren during the past year had seen two cases of the supra-pubic operation, both in the practice of others. One was for stone, and the other for tumor. There seemed to be no difficulty in the operation; both cases recovered without a bad symptom. After investigating the subject of cystotomy in the female, he had reached the conclusion that there need be no apprehension of causing vesico-vaginal fistula.

Dr. Theodore Varick, of Jersey City, two years ago had operated on a boy, 14 years of age, who had had symptoms of stone for seven years. He started with the left lateral operation, but on account of the size of the stone had to carry the incision to the right side. The stone removed weighed seven ounces and two scruples. There was no perceptible laceration, and the boy recovered completely. In cases where there was hemorrhage he had used with advantage the application of water just under the boiling-point, saturating a sponge and placing it for a short time on the bleeding surface.

Dr. David W. Yandell said that he had performed ninety-two operations by the perineum, eight by lithotomy, and six by litholapaxy. He had seen two supra-pubic operations, but it did not seem to him that this operation is an easier or better one than those mentioned. There were seven deaths from the lithotomies. In none of the cases was there any return of the stone. In the eight lithotomies there was a return of the stone in two cases; in the six Bigelow operations there was a return in two cases. The question in his mind is still *sub judice*, and until more evidence has been presented he will adhere to the opinion that the best operation is that made through the perineum.

Dr. John B. Roberts, of Philadelphia, still held the opinion which he expressed three years ago,—that the high operation is certain to be a very important one. If we wish to make a free exploration of the bladder, the high operation is better than the one through the perineum. In cases of stone operated on by a surgeon without special experience in this direction, the supra-pubic operation is the safer. With reference to Dr. Packard's suggestion to treat retention of urine from stricture by supra-pubic cystotomy, he should consider this too serious a step to take in the first place. His own view was that persistent efforts should be made to introduce a filiform bougie, which would drain off the urine. Simple aspiration above the pubes will give a chance for the passage of an instrument through the urethra in two or three days.

Dr. J. E. Michael, of Baltimore: With reference to supra-pubic opening of the bladder for retention due to stricture or prostatic disease, in his considerable experience in this direction he had never found such an operation necessary. Supra-pubic aspiration seems to be all that is necessary, and under proper precautions is safe. Then in prostatic cases the use of a soft catheter will accomplish all that can be done except some radical operation is attempted. In cases of stricture this must be treated. As to the advisability of the supra-pubic operation for exploration for some cases of prostatic enlargement and for exceptional cases of foreign bodies, there can be no question.

A STUDY OF THE PROCESS OF REPAIR AFTER RESECTION OF THE INTESTINES, AND SOME OF THE COMPLICATIONS WHICH OCCUR. BY J. COLLINS WARREN, M.D., OF BOSTON.

The speaker first referred to the anatomy of the wall of the intestine, calling particular attention to the thin submucous fibrous coat, which was the strongest of the various coats of the intestine. The peritoneal and muscular layers, as well as the mucous layer, are easily rubbed away, but this fibrous coat is exceedingly resistant. In introducing the sutures in cases of wound of the bowel, it is desirable that a few fibres of this fibrous coat be included, but care must be taken not to perforate the mucous membrane. The fact that this has been reached is readily told by the resistance offered to the needle. A number of experiments made upon dogs were then described. The operation consists in removing a portion of the intestine and a V-shaped portion of mesentery, and then bringing the parts together; the Lembert suture was the one used. After the operation the bowel was replaced in as near its normal position as possible. The dogs were killed at varying times after operation, from three to eight days. In these cases the intestines were found matted together around the seat of operation, but a current of water flowed freely through the

gut. In one case the abdomen was opened a few days after operation, and this matting together of the various coils of intestine found. The intestine was replaced and the wound again closed. Six months later most of the adhesions were found to have disappeared.

SHOULD LAPAROTOMY BE DONE FOR PENETRATING GUNSHOT-WOUNDS OF THE ABDOMEN INVOLVING THE VISCERA? BY CHARLES B. NANCREDE, M.D., OF PHILADELPHIA.

In presenting this subject for the consideration of the Association, the chief object is a medico-legal one. A few years ago, in a famous murder trial the counsel urged the acquittal of the accused on the ground that the fatal result had been induced by the surgeon probing a penetrating gunshot-wound of the abdomen, and many authorities in support of this position were cited. At present the tendency is towards more active interference in these cases. The author asked that, after a consideration of the subject, the Association—the highest surgical tribunal of the country—should express an authoritative opinion upon this question. The questions to be decided are, What are the tendencies of the injury? are they towards recovery or towards death? When death takes place, what are its causes? When recovery ensues, what conservative processes occur? How likely are these conservative processes to take place, and what favors or prevents them? How reliable are unaided natural methods compared with those which art affords, and should they be imitated or avoided by the surgeon? What are the dangers inherent to the operation of laparotomy, and what advantages does it afford?

Reference was made to the experiments of Wegner and Gerwitz, showing that the healthy peritoneum can dispose of air, serum, bile, and healthy urine. When, however, air and putrescible fluids in greater amount than could be disposed of in a short time were introduced, decomposition occurred, and septicæmia resulted. A notable exception was that living defibrinated blood never decomposed under these circumstances. This seems to prove the truth of the suggestion of the author that the presence of fibrin-ferment and probably its absorption is one of the dangers of peritoneal traumatism. The ordinary micro-organisms produce no evil effects, provided the quantity of putrescible matter does not exceed that which may be disposed of in a short time. In small quantities the pathogenic micro-organisms produce no harm. Suppurative peritonitis is produced by these micro-organisms when stagnant fluids are present capable of nourishing the bacteria, when the surface of the peritoneum has been destroyed by caustic fluids, and when there is a wound of the peritoneum.

The practical application of these experi-

ments teaches that all blood and serum should be removed and free drainage provided; every wounded surface must be coaptated; if a tube be used, the opening must be carefully guarded; the depression of the circulation present during shock must be removed, and the vascularity of the peritoneum must be kept as near the normal as possible.

When visceral wounds do undoubtedly exist, the tendency of these cases is invariably towards death. Hemorrhage in itself is rarely fatal, but a very small collection of blood may be followed by fatal consequences either through the induction of *sapraëmia* or by furnishing pabulum for the development of organisms productive of suppurative peritonitis. In nearly every case death is due to septic peritonitis caused by extravasated matters. Of those attacked with peritonitis, ninety per cent. die within twenty-four hours. When recovery ensues, the effused matter is absorbed and a limited adhesive peritonitis glues the injured organ to the abdominal walls or to a neighboring viscus. This process is successful in about eight per cent. of the cases.

The conservative processes are favored by absence of effused fluids, or, if present, only slight flatulent, fecal, urinary, or biliary extravasation; by the absence or only slight amount of effused blood or serum; by the favorable relation of the wound to neighboring viscera or the abdominal wall; but above all by the aseptic condition of the peritoneum, of the wounds and their immediate surroundings, and by complete arrest of the intestinal movements. It is apparent that nature's methods are not to be relied on.

He said that the dangers of laparotomy are shock, and the risk of rendering a peritonitis septic and diffused which might have remained local and simple; but, as we have the power of rendering the inflammation resulting from the manipulations innocuous, shock is practically the only result to be dreaded.

If these facts and the deductions from them be true, all bullet-wounds of the abdomen involving the stomach, intestines, gall-bladder, or urinary bladder, should be treated by suture or by resection and suture; injured omentum should always be excised, and the serous surfaces carefully sutured. Wounds of the liver and pancreas are to be treated in the manner to be described. A wounded spleen or kidney is to be removed, provided certain contraindications do not exist. Even penetrating wounds of the abdomen without involvement of the viscera are better treated by exploratory section than by the expectant method. In many instances unsuspected injuries of the blood-vessels and viscera will be found and appropriately treated. The speaker laid but little stress upon most of the symptoms said to be diagnostic of wounds of the viscera, and held that the diagnosis should be made by the eye alone. The track of the ball should be

enlarged, under aseptic precautions, until it has been determined whether or not the peritoneum has been opened; then median section should be performed to ascertain the existence of and repair any damage that may have been done. The above remarks can apply only to wounds of the anterior and lateral walls of the abdomen. When the posterior wall is involved it is unadvisable to ascertain the fact of peritoneal penetration by direct exploration. In these cases a correct opinion is almost always difficult, and often impossible, without laparotomy.

The rational signs of peritoneal or visceral lesion were briefly mentioned. The escape of bile, faeces, urine, or the contents of the stomach at once determines the question of visceral penetration. These signs are, however, rare even when visceral lesion is present. Repeated vomiting of considerable quantities of blood almost certainly points to peritoneal or visceral penetration. This symptom is unlikely to be present, even when there are numerous wounds, unless one involves the stomach or upper portion of the small intestine. The passage of blood in quantity by the bowel is strong presumptive evidence, but it rarely occurs early enough to be of practical diagnostic value for operative purposes. The presence of fluid within the abdomen within an hour or two after the injury is a positive indication of peritoneal penetration and probable visceral injury, for only intra-peritoneal hemorrhage could produce such rapid accumulation of fluid. The rapid accumulation of intestinal gas in the general peritoneal cavity is a sure sign of wound of the peritoneum and of the gut. To be of much value it must appear within a short time after the injury. Finally, an amount of hemorrhage which cannot be accounted for after a careful examination of the parietal wounds indicates penetration and vascular or visceral lesion.

Profound shock, if not due to hemorrhage, is a contra-indication to operation. The surroundings should not contra-indicate operation in a proper case, provided the operator be expert in abdominal surgery. Most cases will do better if left to nature than they will if operated on by a bungling surgeon. If well-advanced peritonitis exists, laparotomy is not to be done. Where there is no visceral complication, operation under these circumstances may sometimes be justifiable. Laparotomy, if done at all, should be done at the earliest possible moment that the condition will permit. Shock is the only thing that should delay the operation, and this should not do so if the condition is produced by hemorrhage.

In operating, strictly antiseptic precautions should be carried out. The incision should always be median, extending from a short distance above the umbilicus to two inches above the pubes. Unless there be free hem-

orrhage, the small intestines should be carefully gone over, keeping them constantly enveloped in towels wrung out of hot water. Afterwards the stomach, spleen, kidneys, bladder, etc., must be carefully examined. The source of a severe hemorrhage must at once be sought after. Wounds of the bowel should be secured with the Lembert suture and dusted with a little iodoform. Wounds of the liver, if occupying its free border, should be coaptated, if possible, with dry aseptic catgut, which will soon swell and fill the track made by the needle. If this cannot be done, the hemorrhage possibly may be arrested by the thermo-cautery; or, if the bleeding be free, the wound should be plugged with an iodoform-gauze tampon. If at the close of the operation the bleeding is almost completely checked, the cautery may be used as a further protection and the tampon removed. If, however, the bleeding is still free, the tampon should be replaced and allowed to remain permanently. Wounds of the pancreas, spleen, and kidneys are to be treated in a similar manner. If these measures fail, a spleen or kidney should be removed. Wounds of the bladder had better be united with dry catgut. Contused portions of the bowel should be excised. Wounded or contused omentum or mesentery should also be removed. In removing a portion of the bowel, the cuts should correspond to the distribution of large mesenteric vessels. Should the pulse fall during the operation, flushing the abdominal cavity with hot water is often of service. The peritoneal toilet is most quickly and effectively made by irrigation with warm sterilized water and subsequent removal with sponges. Wounds of the peritoneum should be united. In closing the abdominal cavity the peritoneum should be sutured with fine silk or catgut. The muscular, aponeurotic, and cutaneous structures should then be united with strong silk. The wound should be dusted with iodoform, and the dressing completed by the application of a pad of absorbent cotton and a flannel bandage.

Alimentation should be carried on by the rectum for forty-eight hours when possible. Where peritonitis comes on after the operation, its treatment will depend upon whether it has developed rapidly or gradually. In the former case there is often evidence of shock from vaso-motor paresis, and in these cases small doses of morphine with atropine will be of service, while large doses of opium may prove fatal. This should be continued until pain is relieved and the patient falls into a quiet sleep, from which he is readily aroused. In the latter stages of peritonitis one or more hypodermics of atropia will at times save otherwise hopeless cases. For the control of the vascular processes involved in peritonitis we have two powerful measures in the ice-coil to the abdomen and in the use of leeches if applied early and if the patient has not lost

much blood. If the temperature continues to rise despite treatment, it is probable that ptomaines are being absorbed, producing *sapraemia*. In such cases, irrigation with safe antiseptic fluids is indicated.

In concluding, the speaker stated that everything advanced was to be viewed as more or less provisional, since sufficient experience in the operative treatment of these cases has not accumulated to warrant positive statements.

Thursday, Afternoon Session.

PISTOL-SHOT - WOUND OF THE ABDOMEN TREATED BY LAPAROTOMY AND SUTURING THE INTESTINES. BY R. A. KINLOCH, M.D., CHARLESTON, SOUTH CAROLINA.

J. B., colored, aged 27, was admitted into the City Hospital January 21, at 7.30 P.M. He had been shot, two hours before, in the abdomen with a pistol-ball (.38 calibre). The ball entered one and one-half inches to the left of the umbilicus. There was moderate shock. The patient seemed to be comfortable, with the exception of a slight pain on the inside of the left thigh, which was intensified by movement. Pulse 88, respiration 24, temperature 99°. At 10 P.M. half a grain of morphine was given hypodermically, and shortly afterwards anaesthesia was induced by the A. C. E. mixture. Penetration of the peritoneum was first determined, and the abdomen was then opened by median incision. A weak carbolic spray was used. The intestines were examined piece by piece and wrapped in towels wrung out of a one to ten thousand bichloride of mercury solution. The jejunum presented four wounds,—two of entrance and two of exit. The ileum had two wounds. The mesentery was perforated in two places, and was also badly torn. There was free bleeding from a mesenteric branch, which was controlled by pressure-forceps, and subsequently by ligature of silk. All the wounds were closed with the Lembert suture, using a fine round needle and antiseptic silk. The wounds of the mesentery were brought together as far as was possible, but there was an infiltration of blood which could not be removed. The abdominal cavity was washed out with a weak solution of bichloride of mercury. The abdominal wound was closed with silver sutures, and a large rubber drainage-tube introduced. Antiseptic precautions were observed throughout the operation. The next morning vomiting occurred, and an examination of the wound showed that a suture had given way and a knuckle of intestine protruded. This was returned, and the opening closed. At 5 P.M. the temperature was 102°. Vomiting again occurred, and shortly after midnight the patient expired suddenly.

Post-Mortem.—No adhesion of the parietal peritoneum had occurred. Half a pint of

dark sero-sanguinous fluid was found in the cavity. All the intestinal sutures had held, and there was no fecal extravasation. A circumscribed abscess was discovered in the meso-colon, out of the line of the bullet. The ball was found behind the body of the fourth lumbar on the left side.

This was the third case in which the author had performed laparotomy for bullet-wounds of the abdomen without visceral protrusion. In two cases of such injury the patients recovered without operation. The first operation was performed May 27, 1863. This patient recovered. The operation was performed seven months after the injury. There had been but one discharge from the bowels, and the patient was gradually sinking. This was the first time that laparotomy had been done for gunshot-wound without protrusion.

PISTOL-SHOT WOUND OF THE ABDOMEN, INVOLVING THE LIVER, STOMACH, SUPERIOR MESENTERIC VEIN, INTESTINE, AND KIDNEY — LAPAROTOMY — NEPHRECTOMY — DEATH ON THE FIFTEENTH DAY — AUTOPSY.

This paper was read by W. W. Keen, M.D., of Philadelphia.

Miss B., in Vineland, New Jersey, a plump and healthy, well-developed girl of nearly 18, shot herself with a pistol (calibre .32), at 6.30 A.M., April 1, 1887. Dr. O. H. Adams, who arrived in a few moments, found that the ball had entered over the liver, and after a careful search found it lying under the skin of the left flank.

I saw her at 2 P.M. She told me that the wound was self-inflicted; hence the pistol had been almost in contact with the body, and the ball had probably passed in a straight line. The wound of entrance was over the ninth rib, which was fractured, four and a half inches above the level of the navel, and three and three-quarter inches to the right of the median line. Skin not burned. The ball was located eight inches to the left of the median line, one and a half inches above the level of the navel. There was moderate tenderness over the entire belly; hepatic dulness not changed; stomach resonant from fifth interspace; no cough, no râles; vocal fremitus normal; renal dulness began at tenth rib on left side, and was the same on the two sides. There was severe pain in the left shoulder. She had vomited a drachm and a half of clear bright blood, she told me, immediately after the accident. About a pint of urine, the first since the accident, was drawn by the catheter; it was not bloody. Pulse 104, respirations 30. No material rise of temperature.

As, after consultation with Drs. Adams and Bidwell, it was deemed almost certain that the belly was invaded by the ball, exploratory laparotomy was advised, consented to, and begun at 3 P.M., and lasted nearly three hours, with every antiseptic precaution. The

ball was easily removed just under the skin. Neither wound could be traced positively into the belly. On opening the belly, neither blood nor serum escaped. Nor was any extravasated food or faeces noticed. There was no peritonitis. Two fingers were passed in and an effort made to discover the wound of entrance or exit, without any being revealed by touch. The wound was then enlarged and the stomach drawn out. A small round wound near the pylorus was found, and was closed by four sutures (Lembert) of the finest iron-dyed silk, a round ordinary sewing-needle being used. This wound was practically closed by the pouting mucous membrane. As the ball had entered the stomach, search was made for the necessary wound of exit. None was to be found; but the manipulation showed that a small amount of bloody serum existed in the belly, and a large area of extravasation was seen in the mesentery. But little blood had escaped into the peritoneal cavity. The mesentery was carefully torn through and a small artery tied. The chief bleeding came from a hole nearly one-eighth inch in diameter in a large vein, so large and lax that at first I thought it the vena cava; but its position just below the head of the pancreas convinced me that it was a large superior mesenteric vein just before it forms the portal vein. After much difficulty, I seized it with haemostatic forceps and placed a lateral ligature of chromicized catgut on it.

The anterior border of the liver had been scalloped by the ball, but, as there was no bleeding, it was let alone. In addition, a large wound in a coil of small intestine in the left flank had been found. Ten Lembert sutures were used in closing it.

Returning now to the stomach, a very careful search was again made for the wound of exit. It was found obscured by a slight coating of blood. This was closed by three black silk Lembert sutures.

A systematic investigation of the entire bowel from the stomach to the sigmoid flexure showed no other wound. The left kidney was badly lacerated, and was immediately removed by peeling it out of its capsule and tying the pedicle with a stout silk ligature. A rubber drainage-tube was inserted through the wound of exit into the abdominal cavity.

The wound of entrance was cleansed, and closed by three stitches, and the wound of exit by two sublimate-gauze rubber dams, and a wide flannel bandage completed the dressing.

During the day following the operation suppression of urine was threatened, only three and a half ounces being secreted: this was quite albuminous. The next day, however, the amount rose to twenty-four ounces, and on the third day to forty ounces, and the albumen gradually disappeared. For the first three days nothing was given her except cracked ice, ice-water, and a little whiskey and champagne. On the fourth day pepton-

ized milk in frequent but small quantities was allowed, with rectal enemas of the same, and later other liquid foods. Menstruation appeared regularly when due on April 3, and pursued its usual course of four days. On the 8th she had a chill lasting twelve minutes, and the temperature rose to 104° ; but as the most careful examination revealed no spot of special tenderness, no dulness, no fluctuation, and she was almost, it seemed, *in articulo mortis*, it was not deemed prudent to re-open the belly.

The next day, the 10th, she improved somewhat. On the 13th she had another chill, with a temperature of 105.4° ; had vomited several times, and also had some involuntary evacuations. But, as her condition was fair, pulse 136, temperature 101° , the belly was reopened and explored. The intestines were bright and glistening, and no peritonitis existed.

Surgical bimanual examination revealed no pus or special tenderness at the site of the removed kidney, or, so far as it could be located, at the intestinal wound. No shock followed. The next (14th) she had two bloody motions, and gradually failed, dying on the fifteenth day.

The autopsy, by Dr. H. C. Smith, revealed general peritonitis except in the pelvis, but no free pus was found anywhere. Only one wound was found in the stomach, near the pylorus, and this was healed, the four stitches being seen in place. The blood in the mesentery was disintegrating and suppurating, though no abscess existed, nor was there any free pus in the peritoneal cavity. The suppuration was chiefly marked along the mesenteric attachment of the intestine. On the other side of the mesentery corresponding in position to this wound was a spot on the bowel-wall as large as a five-cent coin which was gangrenous, and in its centre were two perforations of the bowel. No wound was found except that discovered at the operation. No trouble was found at the site of the removed kidney. Although it was nearly ten hours from the accident to the time when the intestine and stomach were sutured, no intestinal or gastric juice or fluid escaped, although the intestinal wound was so large, and vomiting occurred three times.

The kidney, I believe, has never before been removed at a laparotomy for gunshot-wound, but it was clearly the right thing to do. The day following the operation the remaining kidney worked badly, only three and a half ounces of albuminous urine being secreted; but the next two days dispelled all anxiety on this score, the urine rising to twenty-four and forty ounces respectively, and the albumen soon disappeared. The early and marked compensatory enlargement of the right kidney is also of great interest and importance, though of course now well known to follow nephrectomy.

DISCUSSION.

Dr. P. S. Conner, of Cincinnati: When an operation is required, we are all agreed as to what should be done; but the most important point to determine is, *When* should the abdominal cavity be opened? The question of diagnosis is of great importance. If there is extravasation of bile, faeces, or urine through the wound, the nature of the injury is clear; but in the absence of these signs there is much doubt. There is no single symptom or collection of symptoms to be relied upon. He had been disposed to attach some value to the presence of profound depression of temperature. If the temperature remains subnormal four, five, or six hours, penetration and perforation may be considered almost certain. Diagnostic laparotomy is admirable in certain cases. In private practice we have to be largely governed by the opinions of the patients and friends. Many of these cases necessarily involve legal investigation, and it is a very simple matter to show that death resulted not from the original injury, but from the surgeon's knife. While it is wise to lay down the general rule that penetrating wounds of the abdomen—and still more perforating wounds of the viscera—should be submitted to laparotomy, at the same time we are not justified in laying this down as a hard and fast rule.

Dr. Moses Gunn, of Chicago: When Dr. Sims proposed this operation few years ago, the profession was not ready to accept it. We are now all prepared to say that it is a proper method to pursue, but the only question is how to make the diagnosis. We have, as has been said, no positive signs of visceral injury. We are now fully warranted in saying that we may resort to laparotomy for purposes of diagnosis when we are in doubt.

Dr. T. Richardson, of New Orleans, looking over the statistics of the Charity Hospital of New Orleans, had found that in the last five years there were thirty-one cases of penetrating knife-wounds of the abdomen, of which twenty-four recovered and seven died. There were thirty-three cases of gunshot-wound of the abdomen, with thirteen recoveries and twenty deaths. Laparotomy was performed in one of the fatal cases of gunshot-wound; all the others were treated on the expectant plan.

Dr. D. Hayes Agnew, of Philadelphia, said that he had some very strong convictions in regard to laparotomy, and believed that, where there is a reasonable degree of evidence that there is a penetrating wound of the abdominal wall, especially of a shot-wound, it is the surgeon's duty to make an exploratory incision. We are not to be deterred by the possibility of some legal technicality if the case should come into court. We are to do our duty, without reference to the consequences.

Drs. David Prince, Joseph Ranschoff, and

N. P. Dandridge also reported cases bearing upon this discussion.

REPORT OF A CASE OF VENTRAL HERNIA SUCCESSFULLY TREATED BY OPERATION, WITH A SUGGESTION AS TO THE METHOD OF OPERATING. BY J. EDWIN MICHAEL, M.D., BALTIMORE.

Mrs. F., stout woman, 45 years of age, had a ventral hernia resulting from a fall several years previously. Great annoyance was experienced in the use of pads and bandages. The longitudinal opening was about two and a half inches in length. The patient insisted on operation.

March 15, 1886, the operation was performed. Antiseptic precautions were adopted. Free incision was made in the median line. The sac was carefully separated from surrounding tissues. It was then emptied of its contents and opened. The sac was cut off close to the margin of the ring. Strong silver-wire sutures were passed a little less than one-half an inch apart, having a hold of one-half to three fourths inch. The sutures included the peritoneal, muscular, and tendinous structures only. These were twisted, and perforated shot employed. The wire was then cut off close. The skin and subcutaneous tissues were secured with catgut sutures. A half-dozen catgut strands were placed in the wound for drainage. The wound united rapidly. In October, examination of the wound showed it to be firmly united. The sutures could be felt, but gave no inconvenience. In his remarks the speaker stated that his object in using the wire sutures in this manner was the expectation that they would be surrounded by a mass of cicatricial tissue, making a permanent closure of the ring. As far as he was aware, he had used the wire for this purpose without precedent.

A paper on "Prognosis in Sarcomata of the Breast," by Dr. S. W. Gross, of Philadelphia, was read by title and referred to the Publication Committee.

THE MEDICO-LEGAL ASPECT OF CRANIAL AND THORACIC WOUNDS (SUICIDAL). BY D. HAYES AGNEW, M.D., OF PHILADELPHIA.

The study of this subject had been suggested to him by a recent case occurring at Newport, Rhode Island. The question was as to the possibility of a cranial wound and a wound of the heart being self-inflicted. A colored man was found one morning lying dead under the breakfast-table. He had food in his mouth, and had a wound of the head and of the heart. The coroner's jury rendered a verdict of suicide, and the body was buried. Subsequently it was disinterred and the verdict reconsidered, and the conclusion reached that the man had been murdered. Suspicion then fell upon the son-in-law of the man, who had up to this time

borne a good reputation. At the trial five medical experts were called for the prosecution, and their general testimony was that these wounds were incompatible with the idea of suicide. Subsequently the prisoner confessed that he had committed the murder. As this was an important question, the author had investigated it. There are two conditions resulting from injury of the head which would prevent the infliction of a second injury: these are unconsciousness and paralysis of one or both upper extremities. Injury to the brain is not necessarily followed by loss of consciousness or by paralysis. Many cases were cited to show the truth of this statement. Numerous instances of heart-injury were given in which, after the reception of the accident, the individual was able to perform many acts. Cases were also given in which persons, in attempting suicide, had produced injuries of the head and of the heart. As the result of his study, the speaker concluded that it is possible for a ball to enter the brain without destroying consciousness, although for a moment it may cause mental confusion, and that a suicide may shoot himself in the head, and after a moment shoot himself in the heart.

In the discussion which followed, numerous cases were related in which the heart or brain had been injured and the individual had lived for some time and had not been unconscious. Cases were also given in which both a wound of the brain and of the heart had undoubtedly been produced by the individual himself.

(To be continued.)

OBSTETRICAL SOCIETY OF PHILADELPHIA.

MEETING OF APRIL 7, 1887.

(Continued from page 579.)

OVARIAN CYST SIMULATING OCTOPIC GESTATION. (REPORTED FOR DR. F. A. PACKARD.)

MRS. T., Italian, white, æt. 29; married the second time about two years ago; had five children, all by the first husband; no miscarriages; labors all easy and natural; made good recoveries, and nursed all her children. Menstruation regular in time and quantity until November, 1886: it was absent in November and December.

For the past month she had been bleeding freely, the hemorrhage appearing in clots mixed with what seemed to be shreds of decidua. The breasts tingle, but are not apparently enlarged; face blotchy; no abdominal enlargement noticed. She has had nothing like labor-pains. The discharge is of bad odor. She has had no fever or chills.

Examination showed a cystic tumor in the pelvis, to the right of the uterus, about the size of a gravid uterus of the second month.

Operation.—On January 10, the patient being etherized, an incision three inches in length was made in the median line of the abdomen, just above the pubis. Hemorrhage from the abdominal wound was slight. A small cyst of the right ovary was found, consisting of two chambers,—one being filled with clear serous, the other with darker, blood-stained fluid. There were no adhesions. The cyst was removed unruptured, the pedicle ligatured with silk and returned. The cyst was about the size of a small orange, and sprang from the right ovary. The patient's condition after the operation was excellent. She had no rise of temperature or pulse, and no pain. Four stitches were removed on the fifth day, and the remainder on the seventh day. There has been no return of the bleeding.

ABDOMINAL SECTION FOR INTESTINAL PERFORATION. (REPORTED FOR DR. FRANCIS L. HAYNES.)

Mrs. M., aged 20, nullipara, had suffered for nearly a year from diarrhoea, cough with purulent expectoration, and symptoms produced by uterine disease and general weakness. March 9, 1887, she was suddenly seized with severe abdominal pain, which shortly became intense in a spot two inches to the right of the median line and three inches above Poupart's ligament. The temperature varied from 100° to 104° ; pulse from 120 to 140. Vomiting and purging and slight ballooning were other symptoms. The attending physicians, R. and F. L. Haynes, diagnosed peritonitis from intestinal perforation.

As the patient gradually became worse, Dr. Joseph Price made abdominal section on March 14. The intestines were found matted together. They were washed and wiped with sponges. Two pieces of fecal matter, each about the size of a pea, together with some serum, were removed from the cavity. The abdominal pain and swelling now diminished, and by the third day after the section had entirely disappeared. The temperature gradually sank to the normal. On the seventh day the patient became delirious, collapsed, and died on the morning of the eighth day after the section. No autopsy was allowed. It was thought that general tuberclosis was the cause of death.

PYOSALPINX IN ITS RELATION TO PUEPERAL FEVER.

Dr. J. M. BALDY presented this specimen not simply because it was one of pyosalpinx, but because of its extremely important relation to the puerperal state, and, as far as he is aware, because it is the first of its kind ever operated upon and life saved when the patient was dying from so-called puerperal fever. The patient, Mamie P., 23 years of age, was delivered of a male child, after a tedious but normal labor, some four years ago. She was

at that time confined to her bed for eight weeks with "an inflammation in her stomach." She, however, made a good recovery, and has not suffered from pain or ache in her abdomen since. On February 3, 1887, he was called to attend her in her second labor. Although he went with the messenger, he found the labor over: a dead child, together with the placenta and all the membranes intact, lay between her thighs. Her uncovered arms, chest, and legs were exposed in a room without a fire. No examination was made, but she was put between warm, dry bedclothes as quickly as possible. On the second or third day she had a chill, with a quick rise of pulse and temperature, and a tympanitic and tender abdomen. These symptoms abated somewhat, and he lost sight of her for several weeks. On the 3d of March, one month after her confinement, he was again summoned to her, and found that she had been suffering ever since he had last seen her. She had become so emaciated that he hardly recognized her; her temperature $102^{\circ}+$, pulse 130; she had continual chills and creeps, hectic, night-sweats, and sleepless nights; her abdomen was swollen and tympanitic and intensely painful; her bowels loose and fetid; micturition and defecation were both painful. She was evidently fast approaching death. An examination of the soft parts showed no sign of a recent tear. The uterus was subinvolved, and on the left side there was a large boggy mass firmly adherent, tortuous, and extremely tender. The right side was tender, but no mass could be detected. Abdominal section was advised as the only remaining hope of saving her life, and the proposition was eagerly accepted by the patient and her friends. Dr. J. Price saw the patient and confirmed the opinion of immediate operation. He operated on March 5, the delay being necessary in order to have her surroundings cleansed. Drs. J. Price, McMurtie, of Danville, Kentucky, and Mr. Eckman, of Scranton, Pennsylvania, were assisting. The right tube and ovary were healthy, and were not removed; the left tube was almost as large as the uterus, and firmly adherent in all directions, especially to the bowels, from which it was separated with great difficulty. An abscess of the cellular tissue was ruptured while breaking up the adhesions, and pus welled up through the abdominal incision. Both tube and ovary were removed. A large cheesy mass on the bowel at the point of adhesion was trimmed down with scissors, and Monsel's solution applied to the bleeding points. After a free irrigation a drainage-tube was put in, and the incision, which was only one and a half inches in length, was closed. The tube was found to be distended with pus; the ovary was disintegrated and contained pus. The patient rallied quickly, and had no shock; her pulse fell to 80 and her temperature to normal within twelve hours, and remained so. The tube was re-

moved on the seventh day. There had been little or no pain ; no catheter, no laxative or drug of any kind, had been employed. The day after the removal of the tube her pulse began to rise, as also did her temperature ; pain developed in the left ovarian region, and she began to have hectic and cold creeps. About the eleventh day there was a free gush of pus from the tube-tract, and she began to improve again from that moment. A rubber tube was inserted and passed deep into the pelvis, and the abscess was washed out twice daily. The discharge gradually diminished, and the tube was again removed. The wound is now completely healed, and the patient is a well woman.

The belief that a certain proportion of our puerperal fever cases are simply cases of salpingitis septica is by no means a new one, and is probably held by most of the great operators in the world. Dr. M. Sänger says that "salpingitis septica coexisting with severe puerperal septicæmia has never as yet given the surgeon an opportunity to remove the principal focus of disease by the extirpation of the tubes. It is possible, however, that under certain circumstances such a procedure might be indicated." Dr. Carl Schröder holds that "septic endometritis does not extend to the tubes, as a rule. Occasionally, however, it does go on to a purulent salpingitis." That these cases do exist much more frequently than we have had any idea of is certain, and that oftentimes a life otherwise doomed can be saved by operative interference is proved by the case presented to-night. Mr. Tait mentions four deaths from this cause in Queen Charlotte Hospital alone, and says "that these cases were, during life, all regarded as puerperal fever." Dr. A. Martin, out of a total of two hundred and eighty-seven cases, found that seventy resulted from the puerperal state. Dr. Sänger mentions two cases which have come to his knowledge in which the over-distended tubes burst and discharged pus into the abdominal cavity, with death on the fourth day after confinement in one case and on the twenty-first day in the second case. He thinks that in both these cases the salpingitis existed before delivery, and mentions a case in his own practice in which this certainly was the condition. Hecker, as early as 1878, mentions two cases in which the pyosalpinx was old and was only lit up by the puerperal state. Whether the disease arises *de novo* or, having already existed from other causes, is simply lit up by the puerperal state, must be determined in each individual case. Hecker's and Sänger's cases, as mentioned, had a pre-existing salpingitis, but in the seventy cases reported by Martin the micro-organisms of puerperal septicæmia were found in the contents of the tubes, and no mention is made of any other micro-organism, so it is fair to presume that these cases arose from the puerperal state pure and simple. Of course the pos-

sible contagion of gonorrhœa can never be eliminated except by a microscopic examination. In his case, although the trouble seemed very clearly to have arisen at the time of the second labor, possibly with her first labor also, yet the chances of gonorrhœal infection both before and after her first pregnancy are so great that he cannot pretend to say it was not present. The operation has up to this time been done at least four times in Philadelphia. One case was operated on just two weeks previous to mine by Dr. Longaker, in which a pyosalpinx was found and removed, the patient dying on the second day. Dr. J. Price has since operated twice, and in one case found more than a quart of pus in the abdominal cavity. The case unfortunately fell into his hands too late, and the patient survived only two days. These cases, though few in number, certainly teach us that the work done in this direction is encouraging, and, although a large percentage have died, it only warns us of the extreme importance of an early diagnosis and prompt surgical interference. It becomes our imperative duty in every case of post-puerperal trouble to make a thorough investigation of the case on the appearance of the first symptoms, and should a fulness be found on either or both sides of the uterus, accompanied by pain on touch and with constitutional symptoms of gravity, there should be no hesitation as to the course to pursue. This being secured, our present high mortality of one woman out of every hundred delivered in large cities, as recently stated in a statistical paper on lying-in charities in the United States, must be largely diminished, and the fatal influences now surrounding our parturient women must become infinitely less.

Dr. J. PRICE remarked that the operation in this case was difficult and tedious, and was done with great care. He believes that conception can take place coincident with desquamative salpingitis. Salpingitis even of gonorrhœal origin may affect one tube only, and the other, being normal, may give exit to an ovule. Six months ago he removed a large pus-tube from the right side ; the woman is now four months pregnant. If he finds induration and distension of a tube with inflammatory symptoms during the post-parturient period, he does not hesitate to operate at once, the operation involving less danger to the patient than the rapid progress which the inflammatory process will take at that period. He read from a letter from Mr. Tait, "There can be no doubt as to the frequency of the occurrence of puerperal pyosalpinx, and what we want to do is to hammer at people until we get them to open the abdomen in primary puerperal peritonitis." Dr. Price does not think septic post-partum salpingitis would be unilateral. He would also call attention to the extreme degree of degeneration that has taken place in the tissues of the tubes themselves, and most commonly unilateral only : they are

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quite cheesy in character. This change could not occur in so limited a space of time, a few days only.

Dr. LONGAKER remarked that one of the four cases referred to by the author of the paper was a patient who was under his care, and who died forty hours after operation. Briefly, the history of the case is as follows. A young woman from Maryland came to his office, being in the sixth month of her first pregnancy, for treatment for a profuse mucopurulent discharge having all the characteristics of a recent gonorrhœa. A month later, premature labor set in. The child did not live. The placenta came away entire. Four days after labor she began to complain of a severe pain in the left inguinal and hypogastric regions, paroxysmal and associated with great tenderness. The tongue was dry, but there was no nausea or vomiting. There was no chill, but the temperature was slightly elevated. The same symptoms continued for the next two days. On the eighth day, 7 A.M., she began to complain of intense cutting pains; temperature 96.5°, pulse 96. Four hours later, under the free use of morphine, the pain was relieved, the temperature had risen to 102°, and the pulse to 120. Dr. Joseph Price kindly saw the case with him, and agreed on the advisability of laparotomy. During the afternoon her temperature continued to rise, reaching 104° in the evening. On the following day she was much better, was free from nausea and vomiting, and had no severe pain. Owing to this apparent improvement, Dr. Longaker allowed himself to be persuaded to put off operating. The abdomen was opened February 14, 1887, the ninth day after delivery, and nearly sixty hours after the onset of acute peritonitis. General peritonitis and a large quantity of pus in the region of the left cornu uteri, exceedingly foul in odor, were found. The left tube was removed; it was an inch in diameter. The uterus was fairly involuted; it was firmly fixed in the pelvis. The wound drained freely, but incessant vomiting set in, and the patient died forty hours after operation. Is it not assuming too much to say these cases had pyosalpinx before conception? He is sure such was not the case in his patient. Though she had lived irregularly with a man for some five years, she had had at no time such symptoms as would lead us to suspect this disease. It would be possible, if pyosalpinx be the consequence of a poison from without, to find entrance to the tubes during the first three and a part of the fourth month, before decidua vera and reflexa become firmly united, but the result would most likely be an abortion at the time of the invasion. The morbid matter probably obtains access to the tubes after parturition is completed, and owing to the combined circumstances acts in an explosive manner. Is not the pyosalpinx originated after labor as the result, it may be, of a gon-

orrhœa contracted between conception and labor or before conception?

Dr. HIRST presented a specimen from a case of

VIRULENT PUERPERAL SEPSIS,
by permission of Professor Parvin, in whose service the case occurred.

The specimens are interesting not merely because they come from a case of puerperal fever, which unfortunately is not a rare disease, but from the rapidity with which the disease terminated fatally, and from the possible point of entrance of the septicæmic poison. The history of the case before delivery presents nothing worthy of note. Immediately after delivery the temperature was 99.5°, and in spite of the most energetic antiseptic treatment of the vagina and uterine cavity the temperature rose to 102°, but dropped again to 99.5°, only again to rise to 102°, where it remained till the woman's death, about seventy-two hours after the birth. The post-mortem examination showed diphtheroid patches in the vagina extending into the cervical canal; the uterine cavity and walls were normal; the peritoneum, tubes, and ovaries healthy; the kidneys were the seat of numerous metastatic abscesses, and there were several infarcts in the liver; the lungs were healthy; the rectum was covered with extensive patches of diphtheroid membrane,—a very interesting condition, for it indicates the possibility that here was the point of infection, and if this is the case this specimen assumes considerable importance, for he knows of only three such cases recorded in medical literature,—one by Winckel, the others by Koester and Von Recklinghausen. These specimens may well serve to call attention to the possibility of infection by the administration of enemata, and to the importance of observing the most minute precautions as to the chemical cleanliness of every instrument that may come in contact with the parturient or puerperal woman.

A LARGE OVARIAN CYST CURED BY EVACUATION, DRAINAGE, AND OBLITERATION OF ITS CAVITY.

Dr. W. H. PARISH: On January 27, 1887, I operated on a Jewess, 27 years of age, for the removal of a large abdominal cyst. I saw the patient for the first time on January 24. She was then under the care of Dr. N. Hickman, who placed her under my care for operation. She was the mother of four children, the youngest only four months of age. In her last labor she had been attended by a midwife, and but little reliable information could be obtained with reference to the existence of an abdominal tumor during the three weeks following labor. The patient stated, however, that her abdomen was not unusually large after the birth of the child. About three weeks after labor she was under the care of Dr. Hickman for a few days, during which time she presented the usual symptoms of general

peritonitis. She then passed into the hands of others, and was not seen again by Dr. Hickman until just before I operated. During this period of three months she was visited by a number of medical gentlemen. Aspiration was resorted to by one of the number. Laparotomy was repeatedly urged, but persistently refused by the patient. The abdomen increased rapidly in size; pain became constant; appetite entirely disappeared; vomiting occurred at very short intervals; hectic became marked, with occasional rigors, and emaciation had reached an extreme point. The lower extremities were but slightly edematous, and there was no special enlargement of the superficial abdominal veins. The abdomen was greatly distended, tense, and tender, and the patient was so exhausted that she could not rise from the semi-recumbent position. She was at once transferred from her surroundings of filth and poverty to a private hospital, and I operated without delay, as it was apparent that without surgical relief her life could last but a few days longer. There were present Drs. Hickman, R. P. Harris, S. D. Lazarus, John Hand, and F. A. Packard. The patient had a general sponge bath with soap and water, and stimulants had been administered. Before etherization the pulse was 130 per minute; there was a dull percussion-note over the entire abdomen anteriorly, and the diaphragm was pushed well upward by the tumor. Fluctuation was distinct, though palpation suggested a thick-walled cyst rendered very tense by reason of the degree of distension. I gave a diagnosis of ovarian tumor, with suppurating contents and extensive adhesions. Incision two and a half inches long in median line: without opening the peritoneal cavity the knife cut into the cyst-wall, which was easily recognized by its consistency, color, and anatomical elements. There were anterior adhesions of great extent and firmness. The cyst was opened, and a quantity of pus-like fluid of offensive odor escaped. The cyst did not empty itself, and the introduction of two fingers showed large masses of lymph-like character, varying in density and size. The introduction of the hand was required to remove these masses. In the interior were a number of thin septa, such as are seen in colloid ovarian tumors. The great bulk of the contents was an apparent mixture of pus, lymph, and detritus, while part of the contents presented the translucent appearance of the fluid of some ovarian tumors. After thoroughly emptying the tumor it was evident that its walls were everywhere adherent. No portion of the wall could be brought into the abdominal incision. There were evidently dense adhesions to the liver, spleen, stomach, intestines, and to the pelvic brim and contents. The tumor did not dip down into the pelvis; the walls were everywhere thick and strong. At this stage of the operation the patient's condition seemed threatening imminent death:

pulse 140, and exceedingly feeble. The ether was withdrawn, and was not used again; stimulants were given hypodermically. The thickness of the cyst-walls and the universal adhesions rendered the case one well adapted to treatment by drainage. I decided not to remove the cyst. I now thoroughly cleansed its interior, introduced a glass drainage-tube, and approximated around it the walls of the abdomen and cyst, carrying the sutures into the cyst-wall but not through it.

The patient rallied well, and there was no ether-vomiting. For several days the discharge through the tube was of a purulent fluid similar to portions of that removed during the operation; its character then changed to that of ordinary pus. The cavity of the cyst was daily emptied of about two ounces of fluid, and phenol-sodique injected in the same quantity. The abdomen was covered with a compress and binder, to keep the inner cyst-walls approximated and to encourage absorption of the exuded lymph. The area of dulness diminished rapidly from day to day, and the discharge diminished with surprising rapidity. At the end of two weeks a shorter drainage-tube was substituted, and at the end of three weeks rubber tubing about three inches in length was introduced in lieu of the glass tube. The wound was entirely healed by the end of the fourth week. Examination showed a small flattened mass, two by one inches, underlying the abdominal wall and adherent to it. The patient's appetite became ravenous a few days after the operation, and she was fed liberally. The recovery of the patient is now complete, and I feel confident the cyst-cavity is so effectively obliterated that it cannot refill. Does the rapidity of the shrinkage and disappearance of the cyst indicate that it was not an ovarian tumor? I answer in the negative. It was not an extra- nor an intra-peritoneal abscess, for abscesses do not contain such septa nor such fluid. The character of the contents and septa distinguishes this case from two cases operated on by Tait, in which he ascribed the tumors to distention and suppuration of sacculated urachus. In making the incision I recognized the peritoneum external to the cyst. In my own mind there is no doubt as to the ovarian origin of the tumor. A specimen of the fluid was examined microscopically by Dr. F. A. Packard, who has written as follows:

"I found it to be composed of numerous fatty degenerated epithelial cells, leucocytes, and granular material, entangled in a dense mesh-work of fine, homogeneous, fibrin-like fibres. There appeared to be no definite arrangement or other evidence of an organized tissue. The general appearance was that of a tissue that had undergone complete fatty degeneration. I unfortunately ruptured the small cyst before I could collect the contents for examination."

The entire paper will be published in the *American Journal of Obstetrics*.

Dr. R. P. HARRIS remarked that the cyst-contents consisted chiefly of a thin greenish fluid of a puriform character, in which were found masses of cell-structure, some of them as large as a fist, on the surface of which were in some instances still to be seen small translucent cysts containing a yellowish fluid; there was also noticed during the emptying process an escape of fluid from cells which had preserved their integrity, and which resembled to the eye what is often seen in tapping during ovariotomy of multilocular tumors. His own impression during the operation was that the tumor was ovarian. The emaciated state of the woman, her rapid pulse, and the strong adhesions of the cyst-wall to the abdominal parietes and viscera, satisfied him that any attempt to remove the cyst would cause the patient to die either upon the table or of shock in a few hours. Judging from the recoveries after the secondary operation in abdominal pregnancies, where it has been found of vital importance not to remove the cyst,—a measure the value of which was discovered by an accident more than ninety years ago in New York City, which occasioned its being left *in situ* and eventuated in saving the woman's life,—it was decided to adopt the same plan here. When the abdominal wound was closed in Dr. Parish's case, the thick cyst-wall could be felt like a large disk, with edges more than half an inch thick. As the disintegrating process thinned the cyst-walls, contraction of the disk took place, and the centre of the abdomen became deeply fissured, until the diameter of the disk was not more than three inches, and it was also much thinner; this change continued until the percussion-sound showed no dense structure beneath the abdominal wall. As the ovarian tumor was so altered in structure by peritonitis that its lining surface could no longer secrete ovarian fluid, there was no risk of the formation of a discharging fistula, and the wound rapidly closed as the sac contracted.

Dr. B. F. BAER remarked that he thought Dr. Parish acted wisely in not attempting to remove the source from which the fluid was secreted. He was led to express this opinion, first and mainly, because the doctor was not sure at the time of operation that there was a tumor, and, secondly, because of its very close adhesion, if a tumor existed. He questioned the ovarian origin of the fluid in this case upon the following conditions, as stated by the author: 1st, the difficulty of diagnosis before operation; 2d, the character of the fluid,—absence of the ovarian cell especially; 3d, the fact that the secretion so readily ceased after the sac had been opened; 4th, because there was such a rapid disappearance of the cyst-wall. It is so well known to all of us that the secreting surface of a true ovarian tumor is not destroyed by tapping or drainage that we have come to regard tapping and even drainage as very bad practice, where the tumor

can be removed even at considerable risk: free drainage and injecting the tumor were long ago given up as futile in the cure of ovarian tumors. Then the sac of an ovarian tumor does not soon undergo atrophy and absorption, even if the secreting surface is destroyed. The cases of extra-uterine pregnancy mentioned by Dr. Harris, in which the sac disappeared so readily, were doubtless of the abdominal variety, and the gestation sac therefore largely, if not entirely, adventitious. This was probably the character of the sac in a case upon which he (Dr. Baer) operated some time ago and removed a full-term child which had been dead thirteen months. The fetus only was removed. A drainage-tube was placed in the sac. The patient recovered, and all remains of the foetal envelope have disappeared. Dr. Baer would admit, however, that the fluid in the case reported to-night was very like ovarian, except in the absence of the ovarian cell, which he regarded as of very great diagnostic value in a doubtful case. He requested the President to express his opinion concerning the absence of the cell in this case.

Dr. DRYSDALE remarked that it would be very difficult to detect the ovarian cell in such a mass of purulent matter, but if the fluid of the child-cysts had been examined the cell would most probably have been found. He dwelt upon the importance of the investigation of the fluid being made by one familiar with the appearance of the ovarian cells and those resembling them, as without such experience it is difficult to differentiate the cells. Dr. Drysdale referred to an obstetric case which Dr. Parish had attended for him four years ago. This lady suffered from a tumor some years before, which proved to be a dermoid cyst developed in the posterior wall of the uterus. During its growth it formed a communication with the bowel, and a great quantity of offensive fluid escaped in this way. The opening into the bowel closed, the sac filled again, the patient emaciated rapidly, and septicæmia set in. Aspiration was resorted to, and a quantity of very offensive matter removed, after which the cyst was washed out with a five-per-cent. solution of carbolic acid; this was repeated nine times at intervals, the patient declining any other operation. She had now become so emaciated that every process of bone showed through the skin, and her pallor was extreme. In this condition, with a pulse of 140 and a temperature of 105°, she finally submitted to an operation. Before this was commenced she was told that it was not likely that the tumor could be removed, as from its location in the uterine wall and its former communication with the bowel it would probably be found firmly adherent to the surrounding parts. He therefore proposed opening the abdomen, and if the tumor was found to be as he apprehended he would stitch the edges of the cyst to the

[June 11, 1887]

lips of the abdominal incision, insert a large drainage-tube, and close the wound. This was done, and, although the case was so unpromising, she made a good recovery, while the cyst gradually contracted and finally disappeared, but there still remains a fistulous tract where the tube was inserted, which occasionally discharges matter. She became pregnant about three years after the operation, and was delivered of a male child by Dr. Parish, who informed him that she had an easy labor.

Dr. JOSEPH PRICE had no doubt of Dr. Parish's case being an ovarian cyst. He had seen the patient and had recommended operation.

Dr. PARISH remarked that the walls of the cyst were largely composed of adventitious material, the result of inflammatory processes breaking up the original substance, and hence in part the explanation of the rapid cure of the case.

MISCELLANY.

THE American Medical Editors' Association held its Annual Meeting and Banquet at the Palmer House, Chicago, June 6, 1887. A large increase of membership and the warm interest shown by those present indicated a degree of prosperity hitherto unknown in the history of the Association. Preparations were made to have a meeting at Washington during the session of the International Congress, in order suitably to entertain medical editors from abroad.

IODOL AS A SUBSTITUTE FOR IODOFORM.—Dr. R. Norris Wolfenden prefers iodol to iodoform because it is odorless, anæsthetic, and undoubtedly antiseptic. A number of preparations containing this new agent are referred to in his communication to the *Practitioner* for May.

SULPHUROUS ACID IN WHOOPING-COUGH.—Fumigations of burning sulphur of the bed-chamber during the temporary absence of the patient are highly recommended by Dr. Mohnk, a Norwegian physician.—*Therapeutic Gazette.*

NOTES AND QUERIES.

OBITUARY.

EDME FÉLIX ALFRED VULPIAN, born in 1826 at Paris, recently died in the city in which he had attained well-deserved pre-eminence, in the sixty-first year of his age. His lectures on Comparative Physiology, published in 1864, and followed by "Leçons sur la Physiologie du Système Nerveux," led the way to his great works on the Vaso-Motor System and Diseases of the Nervous System, which place him in the foremost rank as a physiologist and pathologist. He was Professor of Comparative and Experimental Pathology, and for several years Dean of the Faculty of Medicine. His death was caused by infectious pneumonia.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 22, 1887, TO JUNE 4, 1887.

MAJOR B. J. E. FRYER, SURGEON.—Granted two months' leave on account of sickness; permission to apply for an extension. S. O. 28, Division of Pacific, May 28, 1887.

MAJOR V. B. HUBBARD, SURGEON.—Granted leave of absence for one month, to take effect on or about June 1, 1887. S. O. 119, A. G. O., May 24, 1887.

CAPTAIN PAUL R. BROWN, ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 126, A. G. O., June 2, 1887.

CAPTAIN H. O. PERLEY, ASSISTANT-SURGEON.—Relieved from duty at Fort Maginnis, Montana Territory, and ordered for temporary duty at Fort Snelling, Minnesota. S. O. 49, Department of Dakota, May 23, 1887.

CAPTAIN H. G. BURTON, ASSISTANT-SURGEON.—Granted two months' leave of absence, on surgeon's certificate of disability. S. O. 107, Division of Atlantic, May 25, 1887.

CAPTAIN F. W. ELBREY, ASSISTANT-SURGEON.—Found incapacitated for active service by an Army Retiring Board; sick leave still further extended until further orders on account of disability. S. O. 116, A. G. O., May 20, 1887.

FIRST-LIEUTENANT LEONARD WOOD, ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Huachuca, Arizona Territory; relieved from duty at Headquarters, Department of Arizona. S. O. 126, A. G. O., June 2, 1887.

FIRST-LIEUTENANT WILLIAM N. SUTER, ASSISTANT-SURGEON (recently appointed).—Ordered for temporary duty at Washington Barracks, D.C. S. O. 122, A. G. O., May 27, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FOR THE TWO WEEKS ENDING JUNE 4, 1887.

PASSED ASSISTANT-SURGEON C. W. DEANE.—Detached from the "Dale" and to Hospital, Mare Island.

SURGEON H. P. HARVEY.—Orders to the "Iroquois" revoked and wait orders.

PASSED ASSISTANT-SURGEON S. H. DICKSON.—Detached from Navy-Yard, Washington, D.C., and to the "Dale."

SURGEON J. R. WAGNER.—Detached from the "Iroquois" and wait orders.

ASSISTANT-SURGEON S. STUART WHITE.—Ordered to Receiving-Ship "St. Louis," Navy-Yard, League Island.

DR. JAMES G. FIELD (of Gordonsville, Virginia).—Commissioned Assistant-Surgeon in the Navy, May 23, 1887.

SURGEON JOHN F. BRANSFORD.—Ordered to the Smithsonian Institution, Washington, D.C.

SURGEON J. RUFUS TRYON.—Detached from the U.S.S. "Quinnebaug" and ordered home.

SURGEON CHARLES A. SIEGFRIED.—Ordered to the U.S.S. "Quinnebaug."

ASSISTANT-SURGEON WILLIAM MARTIN.—Detached from the U.S.S. "Pinta" and ordered home.

PASSED ASSISTANT-SURGEON HENRY B. FITTS.—Detached from the Receiving-Ship "Vermont" and ordered to the U.S.S. "Pinta."

ASSISTANT-SURGEON JAMES G. FIELD.—Ordered to the Receiving-Ship "Vermont."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE SIX WEEKS ENDING JUNE 4, 1887.

GOLDSBOROUGH, C. B., SURGEON.—Detailed to represent the service at the meeting of the American Medical Association at Chicago, Illinois, June 6, 1887, June 1, 1887.

BANKS, E. C., PASSED ASSISTANT-SURGEON.—When relieved, to rejoin station at Boston, Massachusetts, May 23, 1887.

NORMAN, SEATON, ASSISTANT-SURGEON.—When relieved, to rejoin station at Cape Charles Quarantine, May 26, 1887.